



# Staff Report

PLANNING DIVISION  
COMMUNITY & NEIGHBORHOODS

---

**To:** Administrative Hearing Officer, Salt Lake City Planning Division  
**From:** Nannette Larsen, Principal Planner – (801) 535-7645 – [nannette.larsen@slcgov.com](mailto:nannette.larsen@slcgov.com)  
**Date:** April 25, 2019  
**Re:** PLNPCM2019-00177 – Conditional Use for Utility Mounted Antennas

---

## CONDITIONAL USE

**PROPERTY ADDRESS:** 745 Warm Springs Road  
**PARCEL ID:** 18-26-479-004  
**MASTER PLAN:** Capitol Hill Master Plan  
**ZONING DISTRICT:** M-1 Light Manufacturing

**REQUEST:** Craig Chagnon with Crown Castle, representing T-Mobile, is requesting conditional use approval in order to modify an existing antenna and extend the height of the existing monopole. The proposed extension of the telecommunication tower by 20' will result in a tower with a total height of 81'. The proposal also includes additional ground equipment and an extension of the fenced telecommunication area 143 square feet to the north, totaling 1,109 square feet within the fenced area. The additional ground equipment is proposed to include 1 new generator and 2 new cabinets.

**RECOMMENDATION:** Based on the information in this staff report, planning staff recommends that the Administrative Hearing Officer approve the proposed conditional use to modify and extend an existing monopole with a diameter greater than 2' over 60' in height subject to the conditions listed below:

1. Any modifications to the approved plans after the issuance of a building permit must be specifically requested by the applicant and approved by the Planning Division prior to execution.
2. Applicant shall comply with all other department/division requirements.
3. No portion of the proposed electrical equipment shall be located within the required front yard setback.

### ATTACHMENTS:

- A. Vicinity Map
- B. Site Photographs
- C. Application Materials
- D. Site Plan and Elevations
- E. Antenna Zoning Standards
- F. Conditional Use Standards
- G. Public Process and Comments
- H. Department Comments

## **PROJECT DESCRIPTION:**

### **CONDITIONAL USE OVERVIEW**

The request by the applicant is to modify an existing telecommunications tower in order to extend the height of the existing tower by 20'. The tower is located on private property at 745 N. Warm Springs Road toward the south end of the property. The primary use of the property is a commercial business located to the north of the existing telecommunication tower.

In addition to extending the tower an additional 20', from its original 61' to a new height of 81', the application with T-Mobile is also proposing to install 9 new antennas attached to the extended portion of the monopole. Each of the proposed antennas will meet the size requirements of the zoning district which allows individual antennas a maximum visible width of 8' in height and 13' in width. The ground equipment proposed will include 2 new cabinets and 1 new generator. Both the proposed new cabinets and generator will be located to the rear and side of the existing monopole and equipment shelter. Any new or updated monopole or antenna support structure, with a width greater than 2' and which exceeds the maximum height requirement in the underlying zone or exceeds 60' requires a conditional use approval within the M-1 (Light Manufacturing) zoning district.

The area housing the equipment and monopole is completely enclosed with a 6' wrought iron fence. This enclosure presently includes 966 square feet of area and is proposed to expand this area an additional 143 square feet of area for the 2 new cabinets and 1 new generator.

### **LOCATION**

The site under review is located to the immediate north-east of I-15, as I-15 curves around the point of the mountain. To the east of the site are storage units with an office located closest to Warm Springs Road. To the north of the site is another commercial industry, this industry also has an office with outdoor storage. To the south is a small vacant parcel of land with a billboard.

The site is located within the Capitol Hill community and houses a commercial retail business as the primary use on the lot. The existing telecommunication tower is generally surrounded by commercial or industrial types of development and therefore meets the buffer requirement of 330' from residential uses in Salt Lake City's Ordinance.

The existing monopole and accompanying equipment is located in the side yard of the commercial building. The proposed new equipment will be installed to the side of the existing equipment shed and will not encroach into any front yard area.

**North** – Commercial Use

**South** – Billboard/I-15

**East** – Commercial Storage Units

**West** – I-15

### **BACKGROUND**

The telecommunication tower and accompanying equipment have been intermittently updated since its initial approval. The commercial building on the site was constructed in 2007 and has remained in use since its initial construction and issuance of the certificate of occupancy. Generally, new or replacement individual antennas have been the purpose of the updates to the site as technology and the community have changed since its initial construction in 2007.

**KEY CONSIDERATIONS:**

There were no significant issues which were raised through the review and analysis of the project. The key considerations of the project are encompassed in the zoning standards review and the conditions use standards

**NEXT STEPS:**

**Conditional Use Approval**

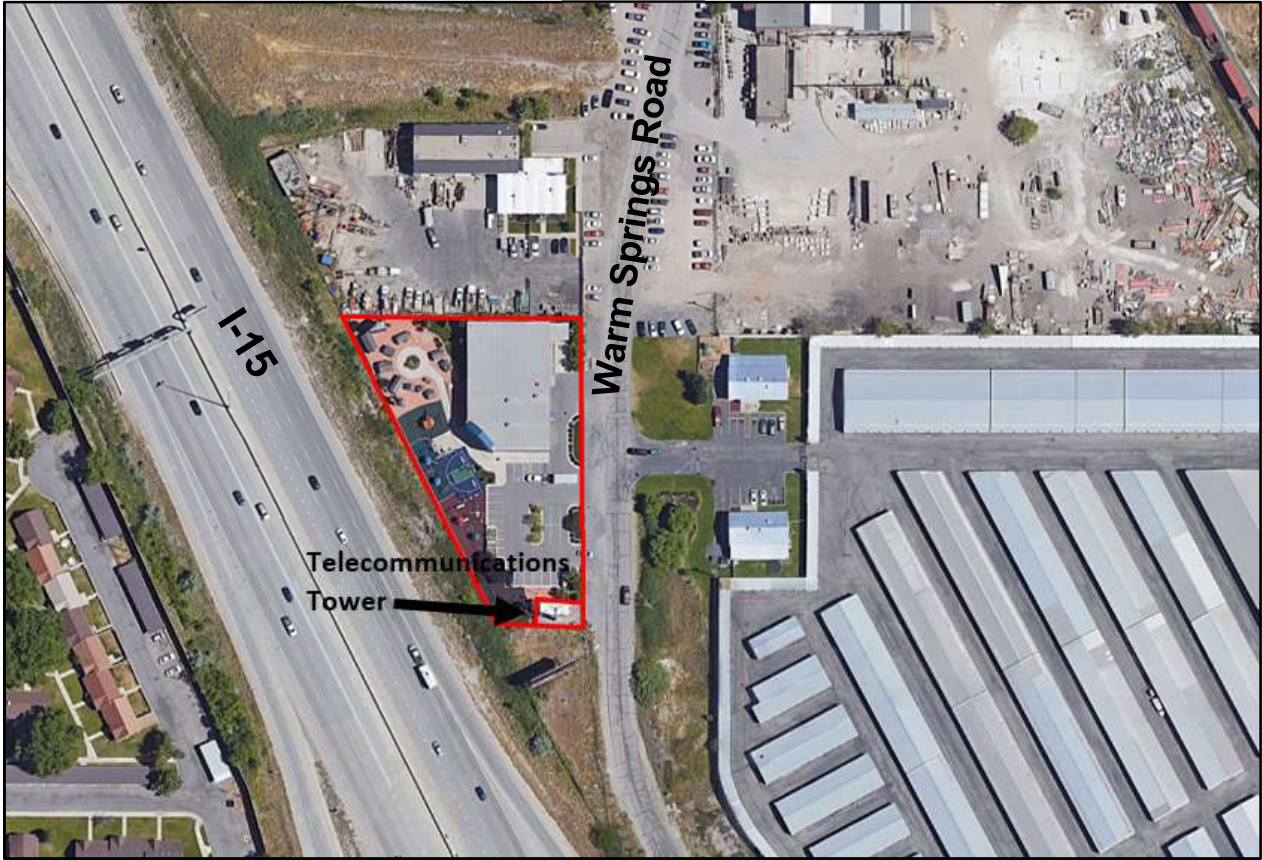
If approved, the applicant may proceed with the project and will be required to obtain all other permits required for the modification of the antenna array and electrical equipment located on private property as proposed.

**Conditional Use Denial**

If denied, the existing antenna array and electrical equipment must remain as previously approved.

# ATTACHMENT A: VICINITY MAP

---





## ATTACHMENT B: SITE PHOTOGRAPHS

---



Figure 1: South Facing View of Antenna on Warm Springs Rd.

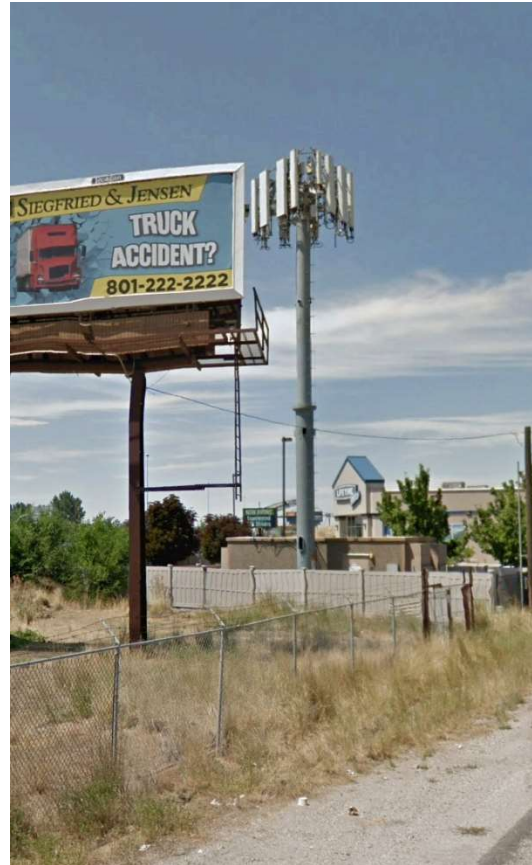


Figure 2: North Facing View of Antenna on Warm Springs Rd.

## **ATTACHMENT C: APPLICATION MATERIALS**



# Conditional Use

SALT LAKE CITY PLANNING

### OFFICE USE ONLY

Project #: <i>PINPM 2019-00138</i>	Received By: <i>A. Argline</i>	Date Received: <i>2/12/19</i>	Zoning: <i>M-1</i>
Project Name: <i>T-Mobile Cell tower</i>			

### PLEASE PROVIDE THE FOLLOWING INFORMATION

Request:  
T-Mobile install 9 antennas, 9 RRU, 3 hybrids, extend existing tower 20'. Install ground equipment.

Address of Subject Property:  
745 Warm Springs Road Salt Lake City, UT 84116

Name of Applicant:  
**Craig Chagnon**

Phone:  
801-979-9077

Address of Applicant:  
2055 S. Stearman Drive Chandler, AZ 85286

E-mail of Applicant:  
**craig.chagnon@crowncastle.com**

Cell/Fax:  
801-979-9077

Applicant's Interest in Subject Property:

Owner     Contractor     Architect     Other: Tower Owner / Lessee

Name of Property Owner (if different from applicant):  
Mower Leasing Company LLC

E-mail of Property Owner:  
**craig.chagnon@crowncastle.com**

Phone:  
801-979-9077

*(* Please note that additional information may be required by the project planner to ensure adequate information is provided for staff analysis. All information required for staff analysis will be copied and made public, including professional architectural or engineering drawings, for the purposes of public review by any interested party.

### AVAILABLE CONSULTATION

*(* Planners are available for consultation prior to submitting this application. Please call (801) 535-7700 if you have any questions regarding the requirements of this application.

### WHERE TO FILE THE COMPLETE APPLICATION

<b>Mailing Address:</b> Planning Counter PO Box 145471 Salt Lake City, UT 84114	<b>In Person:</b> Planning Counter 451 South State Street, Room 215 Telephone: (801) 535-7700
---	---

### REQUIRED FEE

*(* Filing fee of **\$758**

*(* Plus additional cost of postage for mailing notice.

### SIGNATURE

*(* If applicable, a notarized statement of consent authorizing applicant to act as an agent will be required.

Signature of Owner or Agent:  
*Craig Chagnon*

Date:  
**02.12.2019**



116 Inverness Drive East, Ste. 300  
Englewood, CO 80112

Phone: (801) 979-9077  
Fax:  
www.crowncastle.com

February 12, 2019

SALT LAKE CITY CORPORATION  
PLANNING DIVISION  
451 SOUTH STATE STREET SUITE 406

RE: Request to modify equipment on a communications tower located at:  
745 N WARM SPRINGS ROAD, SALT LAKE CITY, UT, 84116  
Crown Site Number: 845638 / Crown Site Name: ROSE PARK  
Customer Site Number: SLO7007A / Application Number: 456325

Crown Castle USA Inc. ("Crown Castle") on behalf of T-Mobile West LLC ("T-Mobile") is submitting the attached Conditional Use application to add transmission equipment on a telecommunications tower located at 745 N WARM SPRINGS ROAD, SALT LAKE CITY, UT 84116 in CITY OF SALT LAKE, UT (the "ROSE PARK Tower").

T-Mobile proposes to modify the "ROSE PARK Tower" as follows:

TMO First Time Install:

- (9) Panel Antennas
- Install (9) RRUs
- Install (3) Hybrid Cable Lines
- Install(3) New T-Arm Mounts
- Install (1) 20' Tower Extension
- Install New 10' x 10' Modular Concrete Equipment Pad
- Install New Generator

Itemized list of submittal documents:

- CUP Application
- Project Narrative
- One 11" x 17" copy of complete drawings
- A digital PDF copy of complete drawings

Conditional Use Information

- If applicable, what is the anticipated operating/delivery hours associated with the proposed use
  - This is an unmanned facility operating 24/7 with occasional maintenance visits.
- What are the land uses adjacent to the property (abutting and across-the-street properties)
  - Property located in the M-1 zone. Adjacent properties are also in M-1. Adjacent on the West side is Interstate 15.



116 Inverness Drive East, Ste. 300  
Englewood, CO 80112

Phone: (801) 979-9077  
Fax:  
[www.crowncastle.com](http://www.crowncastle.com)

- How many employees are expected to work on-site during the highest shift
  - This is an unmanned facility operating 24/7 with occasional maintenance visits.
- If applicable, how many seats will be provided as part of the conditional use
  - This is an unmanned facility operating 24/7 with occasional maintenance visits.
- Have you discussed the project with nearby property owners? If so, what responses have you received?
  - No. This is an existing, permitted facility in the M-1 Zone.

T-Mobile is committed to working cooperatively with all jurisdictions around the country to secure expeditious approval of requests to modify existing personal wireless service facilities. If you should require more information regarding the CUP application, please do not hesitate to contact me with your questions.

Sincerely,

---

Craig Chagnon  
Real Estate Specialist  
801-979-9077



# T-Mobile

**T-MOBILE SITE NUMBER:** SL07007A  
**T-MOBILE SITE NAME:** SL07007A  
**SITE TYPE:** MONOPOLE  
**TOWER HEIGHT:** 61.0 FT

**CROWN CASTLE BU #:** 845638  
**SITE ADDRESS:** 745 N WARM SPRINGS ROAD  
**COUNTY:** UTAH  
**JURISDICTION:** CITY OF SALT LAKE CITY

**T-MOBILE 2018 NSD LAT: 40° 47' 6.74", LONG: -111° 54' 41.20"**

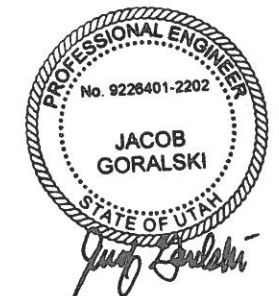
T-Mobile  
 121 W. ELECTION RD., SUITE 330  
 DRAPER, UT 84020

CROWN CASTLE  
 116 INVERNESS DR. EAST STE# 280  
 ENGLEWOOD, CO 80112

**T-MOBILE SITE NUMBER:**  
**SL07007A**  
**BU #: 845638**  
**ROSE PARK**  
 745 N WARM SPRINGS ROAD  
 SALT LAKE CITY, UT 84116  
 EXISTING 61.0 FT MONOPOLE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	12-04-2018	JAS	PRELIMINARY	ELG
0	12-18-2018	JAS	FINAL	ELG
1	01-28-2019	JAS	FINAL	ELG



1/31/2019

**JACOB GORALSKI, PLLC**  
 CONSULTING ENGINEER  
 JACOB GORALSKI, PLLC  
 UT PE# 9228401-2202  
 1106 COLBI ST.  
 KENNEDALE, TX 76060  
 (817) 456-2621

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

**SHEET NUMBER:** T-1  
**REVISION:** 1

**SITE INFORMATION**

SITE NAME:	ROSE PARK
SITE ADDRESS:	745 N WARM SPRINGS ROAD SALT LAKE CITY, UT 84116
COUNTY:	UTAH
MAP/PARCEL #:	08-26-479-004-000
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	40° 47' 6.74"
LONGITUDE:	-111° 54' 41.20"
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	4,225 FT
CURRENT ZONING:	----
JURISDICTION:	CITY OF SALT LAKE CITY
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	VB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	MOWER LEASING COMPANY LLC 3310 E TWIN PEAKS DRIVE LAYTON, UT 84040
TOWER OPERATOR:	CROWN CASTLE, USA 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	T-MOBILE 121 W. ELECTION RD., SUITE 330 DRAPER, UT 84020
CROWN CASTLE APPLICATION ID:	456325
ELECTRIC PROVIDER:	PACIFICORP (888) 221-7070
TELCO PROVIDER:	AT&T MOBILITY (800) 331-0500

**DRAWING INDEX**

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
T-3	GENERAL NOTES
C-1	SITE PLAN
C-1.1	OVERALL SITE PLAN
C-1.2	FINAL SITE PLAN
C-1.3	EQUIPMENT PLAN & DIMENSION PLAN
C-2	TOWER ELEVATION & ANTENNA PLAN
C-3	EQUIPMENT ELEVATION
C-4	PLUMBING & CABLE SPECIFICATIONS
C-5	RFDS
C-6	EQUIPMENT DETAILS
C-7	EQUIPMENT DETAILS
C-8	CONCRETE PAD DETAILS
C-9	MOUNT SPECIFICATION
C-10	GENERATOR DETAILS
E-1	ELECTRICAL PLAN
E-2	ELECTRICAL SPECIFICATIONS
G-1	EQUIPMENT AND ANTENNA GROUNDING PLAN
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR FULL SIZE. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

**LOCATION MAP**

DRIVING DIRECTIONS FROM T-MOBILE LOCAL OFFICE (121 W. ELECTION RD. DRAPER, UT 84020): HEAD WEST TOWARD S ELECTION RD TURN RIGHT TOWARD S ELECTION RD TURN LEFT ONTO S ELECTION RD TURN RIGHT ONTO LONE PEAK PKWY TURN RIGHT ONTO UT-175/W 11400 S USE THE LEFT 2 LANES TO TAKE THE INTERSTATE 15 N RAMP MERGE ONTO I-15 N TAKE EXIT 309 TOWARD 600 NO. E MERGE ONTO 600 N TURN RIGHT ONTO N 400 W TURN RIGHT AT THE 2ND CROSS STREET ONTO 400 N TURN RIGHT ONTO N 600 W N 600 W TURNS RIGHT AND BECOMES I-15 FRONTAGE RD/WARM SPRINGS RD CONTINUE TO FOLLOW WARM SPRINGS RD DESTINATION WILL BE ON THE RIGHT

**PROJECT DESCRIPTION**

THE PURPOSE OF THIS PROJECT IS TO PROPOSE AN ANTENNA MODIFICATION ON AN EXISTING WIRELESS SITE.

**TOWER SCOPE OF WORK:**

- INSTALL (9) PANEL ANTENNAS
- INSTALL (9) RRU's
- INSTALL (3) HYBRID CABLE LINES
- INSTALL (3) NEW T-ARM MOUNTS
- INSTALL (1) 20' TOWER EXTENSION

**GROUND SCOPE OF WORK:**

- INSTALLATION OF NEW 10'-0"x10'-0" MODULAR CONCRETE EQUIPMENT PAD & GENERATOR WITHIN A NEW 12'-0"x10'-0" LEASE AREA WITHIN THE EXISTING FENCED COMPOUND

DESIGN PACKAGE BASED ON THE RFDS  
 REVISION: R0.1  
 DATE: 8/3/2018 2:31:58 PM

DESIGN PACKAGE BASED ON THE APPLICATION  
 ID: 456325  
 REVISION: 0

**APPLICABLE CODES/REFERENCE DOCUMENTS**

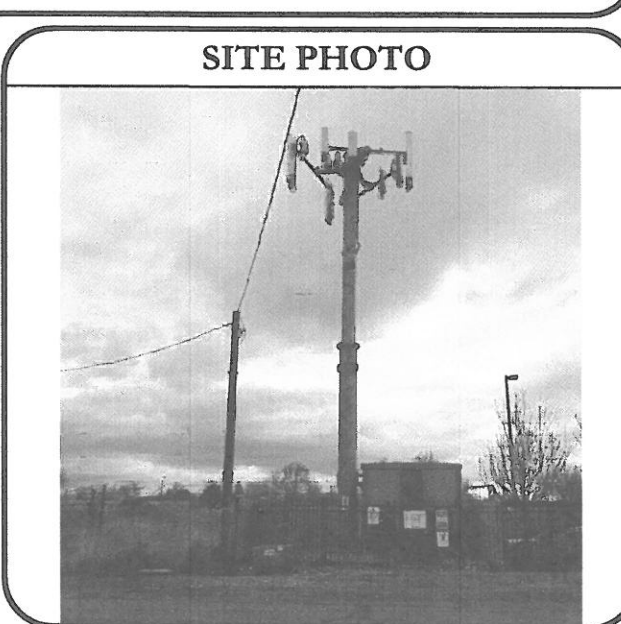
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

CODE TYPE	CODE
BUILDING	2015 IBC
MECHANICAL	2015 IMC
ELECTRICAL	2014 NEC

REFERENCE DOCUMENTS:  
 STRUCTURAL ANALYSIS: BY OTHERS

MOUNT ANALYSIS: BY OTHERS

811  
 CALL UTAH ONE CALL (800) 662-4111  
 CALL 3 WORKING DAYS BEFORE YOU DIG!



**PROJECT TEAM**

**DESIGNER FIRM:** BROADUS SERVICES  
 4 COUNTRY PLACE CIRCLE  
 DALWORTHINGTON GARDENS, TX 76016  
 PH: (817) 349-3449

**ENGINEER FIRM:** FDGARGO P. BRANDAO, P.E.  
 4101 McEWEN RD., SUITE 235  
 DALLAS, TX 75244  
 PH: (972) 239-5495  
 CONTACT: EDGARDO P. BRANDAO, P.E.

**CROWN CASTLE CONTACTS:** 116 INVERNESS DR. EAST STE# 280  
 ENGLEWOOD, CO 80112

NATHAN STRONG - CONSTRUCTION MANAGER  
 NATHAN.STRONG.CONTRACTOR@CROWNCastle.COM  
 (801) 376-2448  
 BRANDON SAENZ - A&E PROJECT MANAGER  
 BRANDON.SAENZ.CONTRACTOR@CROWNCastle.COM  
 (720) 450-3003

T-MOBILE CONTACTS: MACKENZIE KEYS -  
 MACKENZIE.KEYS2@T-MOBILE.COM



**CROWN CASTLE SITE WORK GENERAL NOTES:**













1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.
3. ALL SITE WORK TO COMPLY WITH QAS-STD-10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE TOWER SITE" AND LATEST VERSION OF TIA 1019 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
4. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS.
5. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
6. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
7. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE.
8. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
9. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
10. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
11. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE PROJECT SPECIFICATIONS.
12. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
13. NOTICE TO PROCEED- NO WORK TO COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF A PURCHASE ORDER.
14. ALL CONSTRUCTION MEANS AND METHODS, INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSI/TIA 1019 (LATEST EDITION), OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSI/TIA-1019 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.

**ABBREVIATIONS AND SYMBOLS:**

**ABBREVIATIONS:**

AGL	ABOVE GRADE LEVEL
BTS	BASE TRANSCIVER STATION
(E)	EXISTING
MIN.	MINIMUM
REG	REFERENCE
RF	RADIO FREQUENCY
T.B.D.	TO BE DETERMINED
T.B.R.	TO BE RESOLVED
TYP	TYPICAL
REQ	REQUIRED
EOR	EQUIPMENT GROUND RING
AWG	AMERICAN WIRE GAUGE
MGB	MASTER GROUND BAR
EG	EQUIPMENT GROUND
BCW	BARE COPPER WIRE
SIAD	SMART INTEGRATED ACCESS DEVICE
GEN	GENERATOR
IGR	INTERIOR GROUND RING (HALO)
RBS	RADIO BASE STATION

**SYMBOLS:**

	SOLID GROUND BUS BAR
	SOLID NEUTRAL BUS BAR
	SUPPLEMENTAL GROUND CONDUCTOR
	2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
	SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
	CHEMICAL GROUND ROD
	TEST WELL
	DISCONNECT SWITCH
	METER
	EXOTHERMIC WELD (CADWELD) (UNLESS OTHERWISE NOTED)
	MECHANICAL CONNECTION
	GROUNDING WIRE

**GENERAL NOTES:**

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
 CONTRACTOR- \_\_\_\_\_  
 SUBCONTRACTOR- GENERAL CONTRACTOR (CONSTRUCTION)  
 CARRIER- T-MOBILE  
 TOWER OWNER- CROWN CASTLE  
 OEM- ORIGINAL EQUIPMENT MANUFACTURER
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR AND CROWN CASTLE.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO SCALE AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWINGS.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

**ELECTRICAL INSTALLATION NOTES:**

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC. HILT epoxy ANCHORS ARE REQUIRED BY CROWN CASTLE.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
5. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
6. EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E. HOTS), GROUNDING AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH PLASTIC TAPE PER COLOR SCHEDULE. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (I.E. PANEL BOARD AND CIRCUIT ID'S).
8. PANEL BOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
10. POWER, CONTROL AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET & DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED UNLESS OTHERWISE SPECIFIED.
11. SUPPLEMENTAL EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET & DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET AND DRY) OPERATION WITH OUTER JACKET LISTED OR LABELED FOR THE LOCATION USED UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75° C (90° C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E. RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
16. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT) OR RIGID NONMETALLIC TUBING (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOW/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
21. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER).
22. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
23. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL; SHALL MEET OR EXCEED UL 50 AND RATED NEMA 1 (OR BETTER) INDOORS OR NEMA 3R (OR BETTER) OUTDOORS.
24. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
25. NONMETAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
26. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
27. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
28. INSTALL PLASTIC LABEL ON THE METER CENTER TO SHOW "T-MOBILE".
29. ALL CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

**GREENFIELD GROUNDING NOTES:**

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDING AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUIT TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 AWG SOLID TINNED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (I.E. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 8 FT. OF MAIN GROUND WIRES WITH 1-#2 AWG TIN-PLATED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS, WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED, WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUND THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 TINNED SOLID IN 3/4" LIQUID TIGHT CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE LIQUID TIGHT CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).

**NEC INSULATOR COLOR CODE**

DESCRIPTION	PHASE/CODE LETTER	WIRE COLOR
240/120 1ø	LEG 1	BLACK
	LEG 2	RED
AC NEUTRAL	N	WHITE
GROUND (EGG)	G	GREEN
VCD POS	+	*RED-POLARITY MARK AT TERMINATION
VCD NEG	-	*BLACK-POLARITY MARK AT TERMINATION
240V OR 208V, 3ø	PHASE A	BLACK
	PHASE B	RED (ORG. IF HI LEG)
	PHASE C	BLUE
480V, 3ø	PHASE A	BROWN
	PHASE B	ORANGE
	PHASE C	YELLOW

\*SEE NEC 210.5(C)(1) AND (2)

**T-Mobile**  
 121 W. ELECTION RD., SUITE 330  
 DRAPER, UT 84020

**CROWN CASTLE**  
 116 INVERNESS DR. EAST STE# 280  
 ENGLEWOOD, CO 80112

T-MOBILE SITE NUMBER:  
**SL07007A**

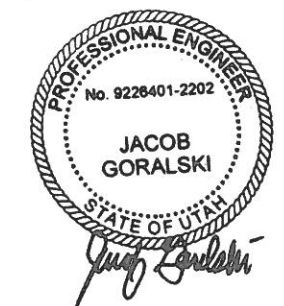
BU #: 845638  
**ROSE PARK**

745 N WARM SPRINGS ROAD  
 SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES/QA
A	12-04-2018	JAS	PRELIMINARY	ELG
0	12-18-2018	JAS	FINAL	ELG
1	01-28-2019	JAS	FINAL	ELG



1/31/2019

**JACOB GORALSKI, PLLC**  
 CONSULTING ENGINEER  
 JACOB GORALSKI, PLLC  
 UT PE# 9226401-2202  
 1106 COLBI ST.  
 KENNEDALE, TX 76060  
 (817) 456-2621

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: **T-2** REVISION: **1**

**A. GENERAL REQUIREMENTS**

THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKMEN WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.

THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF FINISHED STRUCTURE ONLY.

NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS, WHERE NO DETAILS ARE SHOWN. CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED— CONTACT ENGINEER.

WHERE THE PROJECT INVOLVES THE STRUCTURAL SUPPORT OF NEW CONSTRUCTION BY EXISTING STRUCTURES OR REQUIRES THE PLACEMENT OF NEW STRUCTURES IN CLOSE PROXIMITY TO EXISTING STRUCTURES SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND PLACEMENT OF STRUCTURAL ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE DRAWINGS PRIOR TO THE FABRICATION OF ANY NEW STRUCTURE. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE DRAWINGS, THE ENGINEER IS TO BE NOTIFIED AS SOON AS POSSIBLE.

**B. BASIS FOR DESIGN**

BUILDING RISK CATEGORY.....II

**ENGINEERING DESIGN**

**SEISMIC LOAD**  
 SITE CLASSIFICATION.....D  
 SEISMIC IMPORTANCE FACTOR (ASCE 7 / TABLE 1.5-2).....1.0  
 SEISMIC DESIGN CATEGORY.....D

**MAPPED SPECTRAL RESPONSE ACCELERATIONS:**  
 S.S.....1.407  
 S1.....0.498

**SPECTRAL RESPONSE COEFFICIENTS:**  
 SDS.....0.938  
 SD1.....0.499

**WIND LOAD**  
 WIND SPEED (3 SECOND GUST).....115 mph  
 EXPOSURE CATEGORY.....C

**SNOW LOAD**  
 ROOF SNOW LOAD.....30 psf  
 GROUND SNOW LOAD.....43 psf

**FOUNDATIONS**  
**SOIL VALUES:**  
 FROST DEPTH.....30"  
 MINIMUM BEARING DEPTH FOOTINGS.....36"  
 ALLOWABLE BEARING AT MINIMUM DEPTH (DEAD + LIVE).....1,500 psf

FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL. SLABS SHALL BEAR ON AGGREGATE BASE COURSE (ABC) FILL COMPACTED TO 98% OF MAXIMUM LABORATORY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D1557 (MODIFIED PROCTOR). MATERIAL SHOULD BE WITHIN 3% OF OPTIMUM MOISTURE AT TIME OF COMPACTION. NATIVE GRADE SUB-BASE, BELOW ABC FILL, SHALL BE PREPARED BY REMOVING ALL ORGANIC MATERIAL, SCARIFYING TOP 6", THEN RECOMPACTED TO 95% OF MAXIMUM LABORATORY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D1557 (MODIFIED PROCTOR). MATERIAL SHOULD BE WITHIN 3% OF OPTIMUM MOISTURE AT TIME OF COMPACTION.

**CONCRETE**

CONCRETE MIXES SHALL BE DESIGNED BY A CERTIFIED LABORATORY AND APPROVED BY THE ENGINEER. CONCRETE EXPOSED TO FREEZE-THAW CYCLES TO CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH WATER-TO-CEMENT RATIO (W/C) AS SHOWN BELOW. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY ENGINEER. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90° F AT TIME OF PLACEMENT. MINIMUM CONCRETE STRENGTH (f'c) TO BE 3,000 PSI AT 28 DAYS UNLESS NOTED BELOW.

FOUNDATIONS (W/C ≤ 0.50).....4,000 psi  
 SLABS ON GRADE (W/C ≤ 0.45).....4,500 psi

UNLESS NOTED OTHERWISE THE DESIGN STRENGTH (f'c) OF CONCRETE FOR ISOLATED FOOTINGS AND CONTINUOUS WALL FOOTINGS FOR STRUCTURES THREE-STORIES OR LESS SHALL BE 2,500 psi REGARDLESS OF THE SPECIFIED STRENGTH OF CONCRETE PLACED.

**MINIMUM CONCRETE COVER REQUIREMENTS:**

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....3"  
 EXPOSED TO EARTH OR WEATHER (#5 AND SMALLER).....1-1/2"  
 EXPOSED TO EARTH OR WEATHER (#6 AND LARGER).....2"  
 BEAMS AND COLUMNS (TO TIES).....1-1/2"  
 WALLS, SLABS, AND JOISTS (#11 AND SMALLER).....3/4"  
 WALLS, SLABS, AND JOISTS (#14 AND LARGER).....1-1/2"

**CONCRETE SPLICE LENGTH REQUIREMENT - SEE TABLE IN TYPICAL DETAILS**

1. ALL TENSION SPLICES TO BE CLASS B TENSION SPLICES UNLESS NOTED OTHERWISE
2. BAR SPACING TO BE A MINIMUM OF 2 BAR DIAMETERS
3. STAGGER SPLICES A MINIMUM OF ONE LAP LENGTH
4. ALL SPLICE LOCATIONS SUBJECT TO APPROVAL BY THE ENGINEER

MECHANICALLY VIBRATE ALL REINFORCED CONCRETE WHEN PLACED, EXCEPT THAT, UNREINFORCED SLABS ON GRADE NEED VIBRATED ONLY AT TRENCHES, FLOOR DUCTS, TURNDOVNS, ETC. REVIBRATE TOPS OF CHASSIS 15 MINUTES AFTER PLACING CONCRETE. MAXIMUM SLUMP TO BE 4-1/2" FOR CONCRETE WITHOUT PLASTICIZER. IF PLASTICIZER IS USED, A HIGHER FINAL SLUMP MAY BE ALLOWED UPON ENGINEER'S APPROVAL. A 3/4" CHAMFER OF TOOLED EDGE SHALL BE PROVIDED AT ALL EXPOSED CONCRETE EDGES U,N,O.

ALL REINFORCING DIMENSIONS SHOWN ON DRAWINGS AS "CLEAR" SHALL BE CLEAR DIMENSIONS OF PLUS OR MINUS 1/4", TYPICAL UNLESS NOTED OTHERWISE. TOLERANCES FOR "D" DISTANCES TO BE PER SECTION 7.5.2.1 AND 7.5.2.2 OF ACI 318.

PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS. REINFORCING BAR SPACING SHOWN ON DRAWINGS ARE MAXIMUM ON CENTERS. ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK. DOWEL VERTICAL REINFORCING TO FOUNDATION WITH STANDARD 90-DEGREE HOOKS UNLESS OTHERWISE NOTED OTHERWISE. ALL REINFORCING BARS, ANCHOR BOLTS, AND HOLDDOVNS TO BE SECURELY TIED IN PLACE PRIOR TO PLACING OF CONCRETE. ALL REINFORCING SHALL BE CHARGED TO ENSURE PROPER CLEARANCES. SUPPORT OF FOUNDATION REINFORCING MUST PROVIDE ISOLATION FROM MOISTURE/CORROSION.

**STEEL REINFORCING:**

NO TACK WELDING OF REINFORCING BARS IS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE BY THE ENGINEER. REINFORCING BARS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

STANDARD DEFORMED BARS #4 AND SMALLER (Fy = 40 KSI).....ASTM A615  
 STANDARD DEFORMED BARS #5 AND LARGER (Fy = 60 KSI).....ASTM A615  
 ALL DEFORMED BARS TO BE WELDED (Fy = 60 KSI).....ASTM A706  
 WELDED WIRE FABRIC.....ASTM A185

**STRUCTURAL STEEL**

THESE DRAWINGS ARE NOT MEANT TO BE SHOP DRAWINGS TO BE FABRICATED FROM; THEY ARE TO COMMUNICATE THE DESIGN AND INTENT OF THE ENGINEER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EMPLOY AN APPROVED STEEL FABRICATOR AND/OR STEEL DETAILER TO PROVIDE A CORRECTLY FABRICATED STEEL PACKAGE THAT MATCHES THE STRUCTURAL DRAWINGS PROVIDED.

ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS UNLESS NOTED OTHERWISE:

STRUCTURAL SHAPE	ASTM	Fy (KSI)	Fu (KSI)
W (EXISTING)	A36	36	36
W (NEW)	A3992	50	65
M, S, C, MC, L	A36	36	58
HP	A572	50	65
PIPE	A53 GRADE B	35	60
HSS ROUND	A500 GRADE B	35	60
HSS RECTANGULAR	A500 GRADE B	46	58
PLATES & BARS	A36	36	58
HIGH-STRENGTH PLATES & BAR	A588	50	70

ALL EXPOSED STEEL SHALL BE GALVANIZED. GALVANIZING SHALL CONFORM TO THE FOLLOWING ASTM REQUIREMENTS:

HOT DIPPED GALVANIZING OF STRUCTURAL MEMBERS.....A123/123M  
 HOT DIPPED GALVANIZING OF HARDWARE.....A153/A153M  
 HOT DIPPED GALVANIZING OF STEEL SHEETS.....A653/A653M  
 MECHANICAL GALVANIZING.....B695

**WELDING**

ALL WELDING SHALL BE PERFORMED BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN THE TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES. CERTIFICATES SHALL BE THOSE ISSUED BY AN ACCEPTED TESTING AGENCY.

ALL WELDING SHALL BE DONE USING E70 SERIES LOW HYDROGEN RODS UNLESS NOTED OTHERWISE. FOR GRADE 60 REINFORCING BARS, USE E90 SERIES.

THESE DRAWINGS DO NOT DISTINGUISH BETWEEN SHOP AND FIELD WELDS; THE CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS AND FIELD WELDS SHALL BE SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW.

**T-Mobile**  
 121 W. ELECTION RD., SUITE 330  
 DRAPER, UT 84020

**CROWN CASTLE**  
 116 INVERNESS DR. EAST STE# 280  
 ENGLEWOOD, CO 80112

**T-MOBILE SITE NUMBER:**  
**SL07007A**  
  
**BU #: 845638**  
**ROSE PARK**  
  
 745 N WARM SPRINGS ROAD  
 SALT LAKE CITY, UT 84116  
  
 EXISTING 61.0 FT MONOPOLE

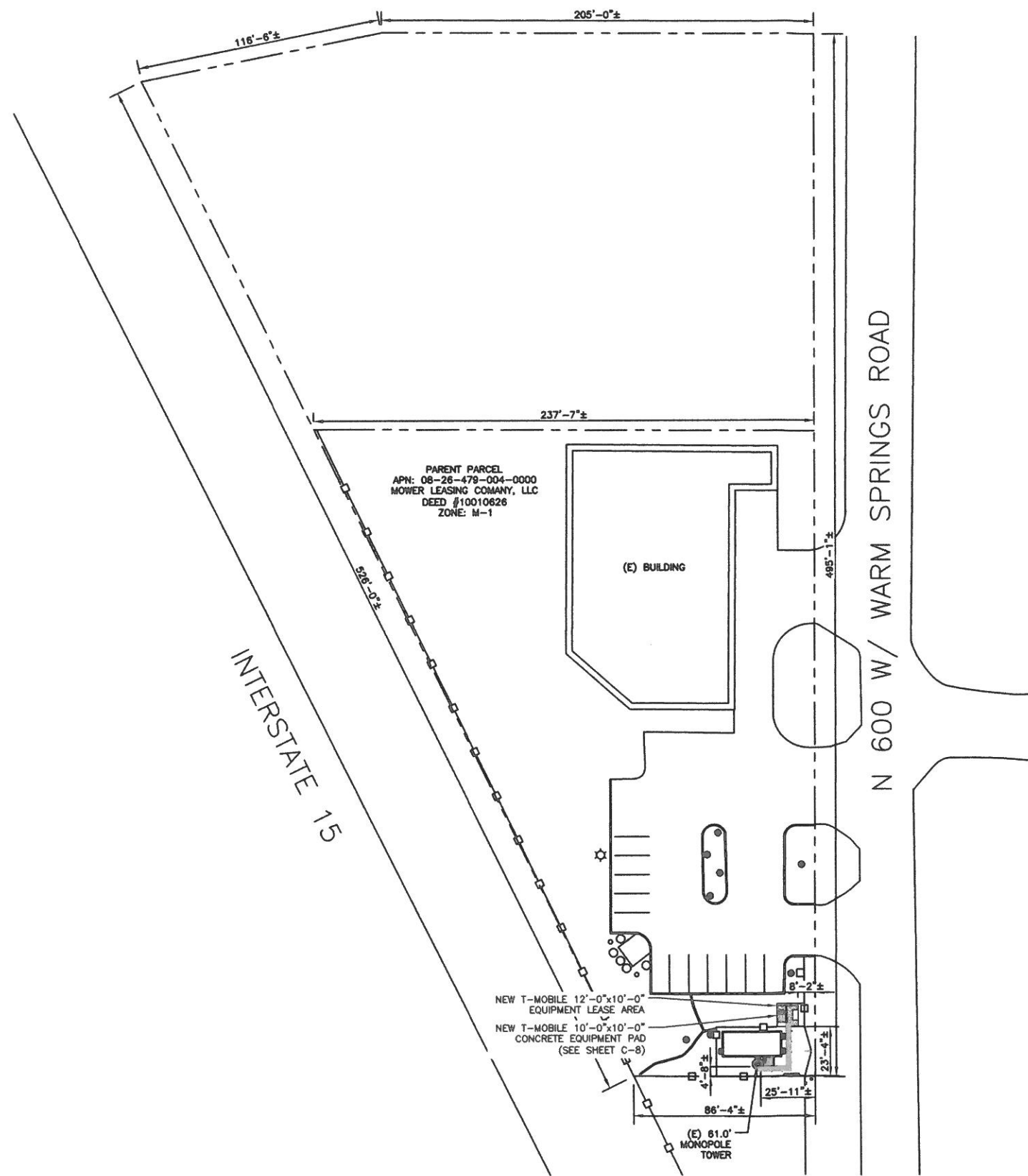
**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES/QA
A	12-04-2018	JAS	PRELIMINARY	ELG
0	12-18-2018	JAS	FINAL	ELG
1	01-28-2019	JAS	FINAL	ELG

**PROFESSIONAL ENGINEER**  
 No. 9226401-2202  
**JACOB GORALSKI**  
 STATE OF UTAH  
*Jacob Gorski*  
 1/31/2019  
**JACOB GORALSKI, PLLC**  
 CONSULTING ENGINEER  
 JACOB GORALSKI, PLLC  
 UT PE# 9226401-2202  
 1106 COLBI ST.  
 KENNEDALE, TX 76060  
 (817) 456-2621  
 IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

**SHEET NUMBER:** T-3 **REVISION:** 1





1 FINAL SITE PLAN  
SCALE: 3/8"=1'-0" (FULL SIZE)  
3/16"=1'-0" (11x17)



**T-Mobile**  
121 W. ELECTION RD., SUITE 330  
DRAPER, UT 84020

**CROWN CASTLE**  
116 INVERNESS DR. EAST STE# 280  
ENGLEWOOD, CO 80112

T-MOBILE SITE NUMBER:  
**SL07007A**

BU #: **845638**  
**ROSE PARK**

745 N WARM SPRINGS ROAD  
SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	12-04-2018	JAS	PRELIMINARY	ELG
0	12-18-2018	JAS	FINAL	ELG
1	01-28-2019	JAS	FINAL	ELG

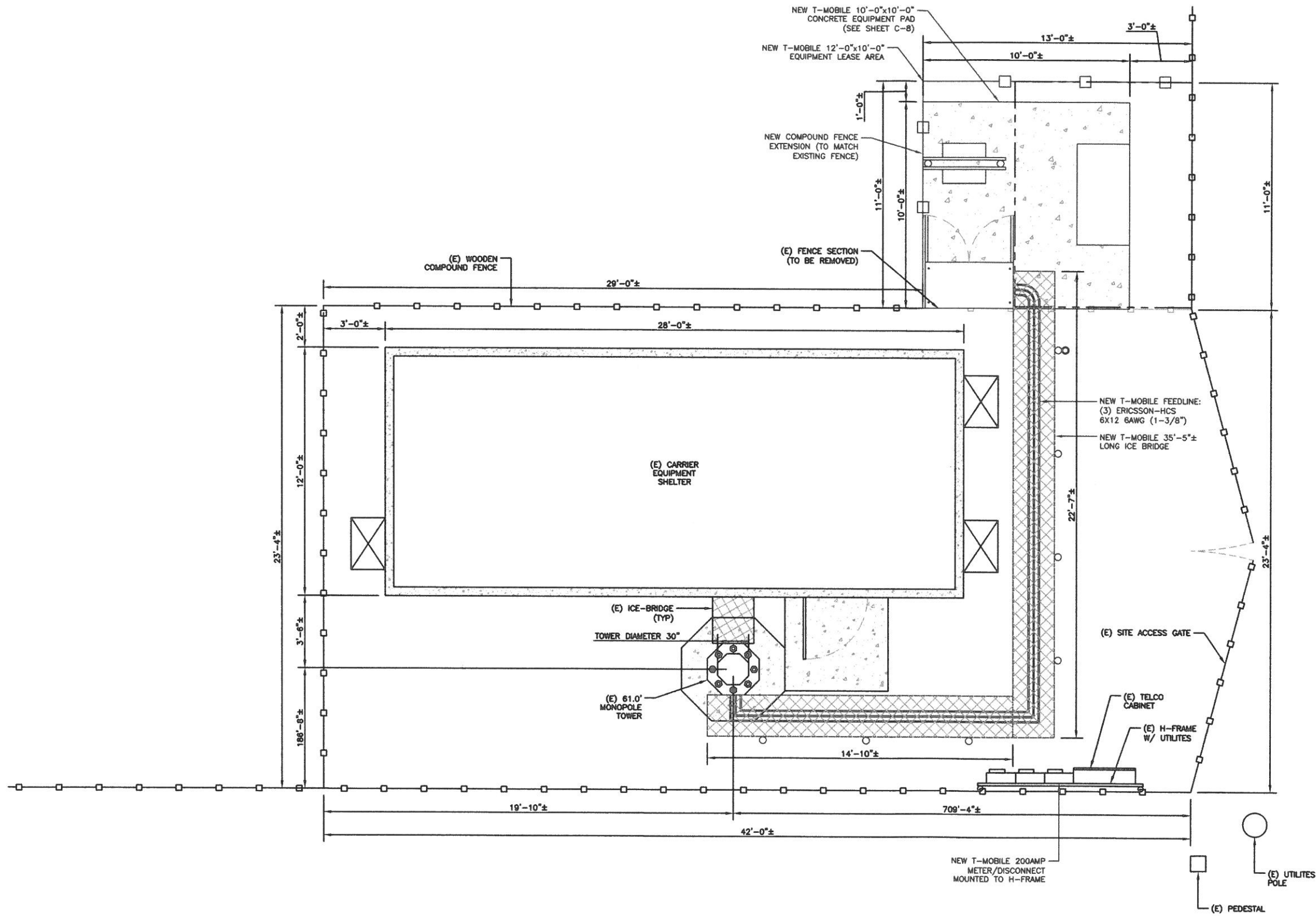


1/31/2019

**JACOB GORALSKI, PLLC**  
CONSULTING ENGINEER  
JACOB GORALSKI, PLLC  
UT PE# 9226401-2202  
1106 COLBI ST.  
KENNEDALE, TX 76060  
(817) 456-2621

IT IS A VIOLATION OF LAW FOR ANY PERSON,  
UNLESS THEY ARE ACTING UNDER THE DIRECTION  
OF A LICENSED PROFESSIONAL ENGINEER,  
TO ALTER THIS DOCUMENT.

SHEET NUMBER: **C-1** REVISION: **1**



1 FINAL SITE PLAN  
 SCALE: 3/8"=1'-0" (FULL SIZE)  
 3/16"=1'-0" (11x17)



**T-Mobile**  
 121 W. ELECTION RD., SUITE 330  
 DRAPER, UT 84020

**CROWN CASTLE**  
 116 INVERNESS DR. EAST STE# 280  
 ENGLEWOOD, CO 80112

T-MOBILE SITE NUMBER:  
**SL07007A**

BU #: 845638  
**ROSE PARK**

745 N WARM SPRINGS ROAD  
 SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

ISSUED FOR:

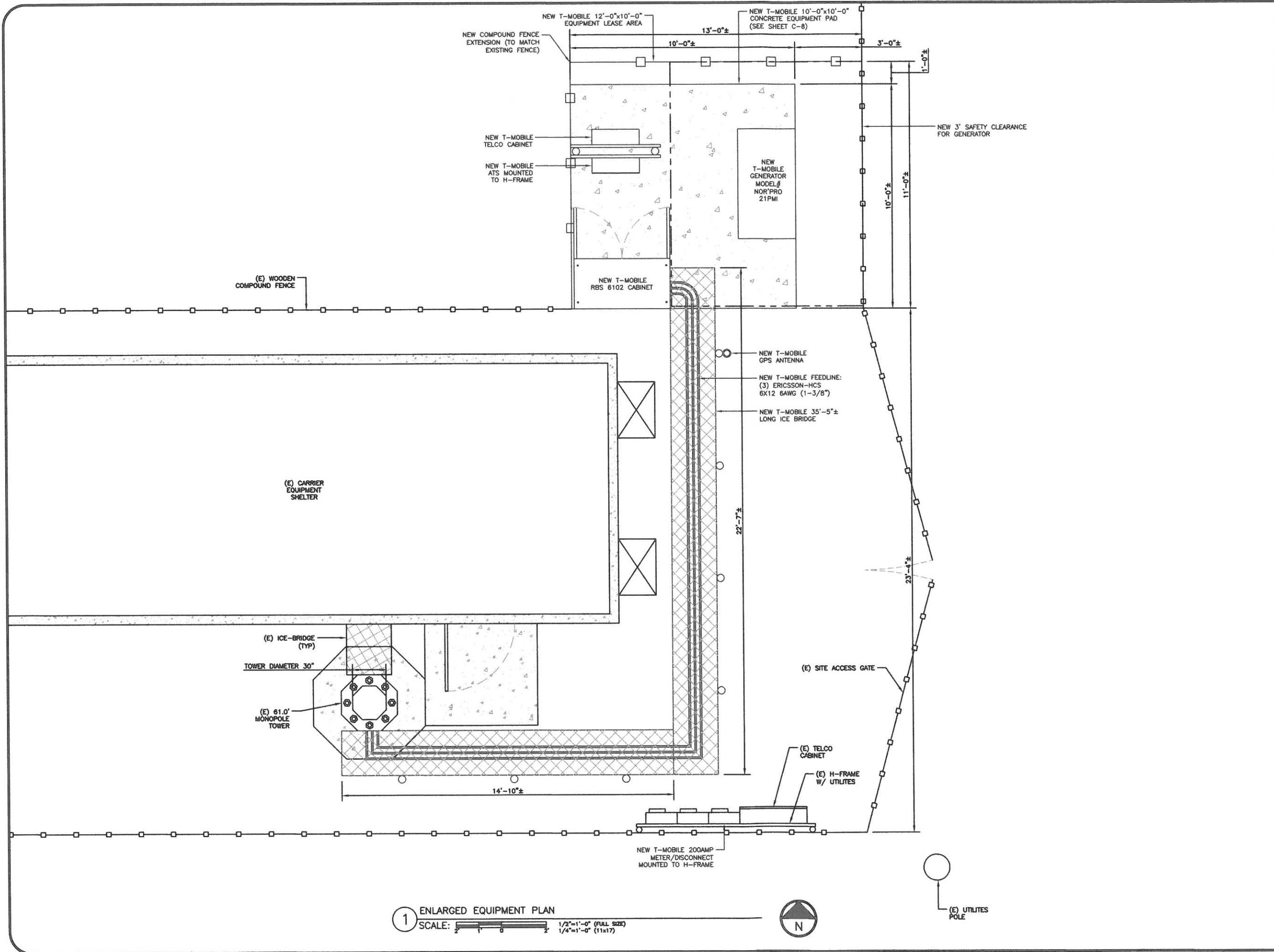
REV	DATE	DRWN	DESCRIPTION	DES./QA
A	12-04-2018	JAS	PRELIMINARY	ELG
0	12-18-2018	JAS	FINAL	ELG
1	01-28-2019	JAS	FINAL	ELG



1/31/2019  
**JACOB GORALSKI, PLLC**  
 CONSULTING ENGINEER  
 JACOB GORALSKI, PLLC  
 UT PE# 9226401-2202  
 1106 COLBI ST.  
 KENNEDALE, TX 76060  
 (817) 456-2621

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: **C-1.1** REVISION: **1**



**T-Mobile**  
 121 W. ELECTION RD., SUITE 330  
 DRAPER, UT 84020

**CROWN CASTLE**  
 116 INVERNESS DR. EAST STE# 280  
 ENGLEWOOD, CO 80112

T-MOBILE SITE NUMBER:  
**SL07007A**

BU #: **845638**  
**ROSE PARK**

745 N WARM SPRINGS ROAD  
 SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	12-04-2018	JAS	PRELIMINARY	ELG
0	12-18-2018	JAS	FINAL	ELG
1	01-28-2019	JAS	FINAL	ELG

**PROFESSIONAL ENGINEER**  
 No. 9226401-2202  
**JACOB GORALSKI**  
 STATE OF UTAH  
*Jacob Gorski*  
 1/31/2019

**JACOB GORALSKI, PLLC**  
 CONSULTING ENGINEER  
 JACOB GORALSKI, PLLC  
 UT PE# 9226401-2202  
 1106 COLBI ST.  
 KENNEDALE, TX 76060  
 (817) 456-2621

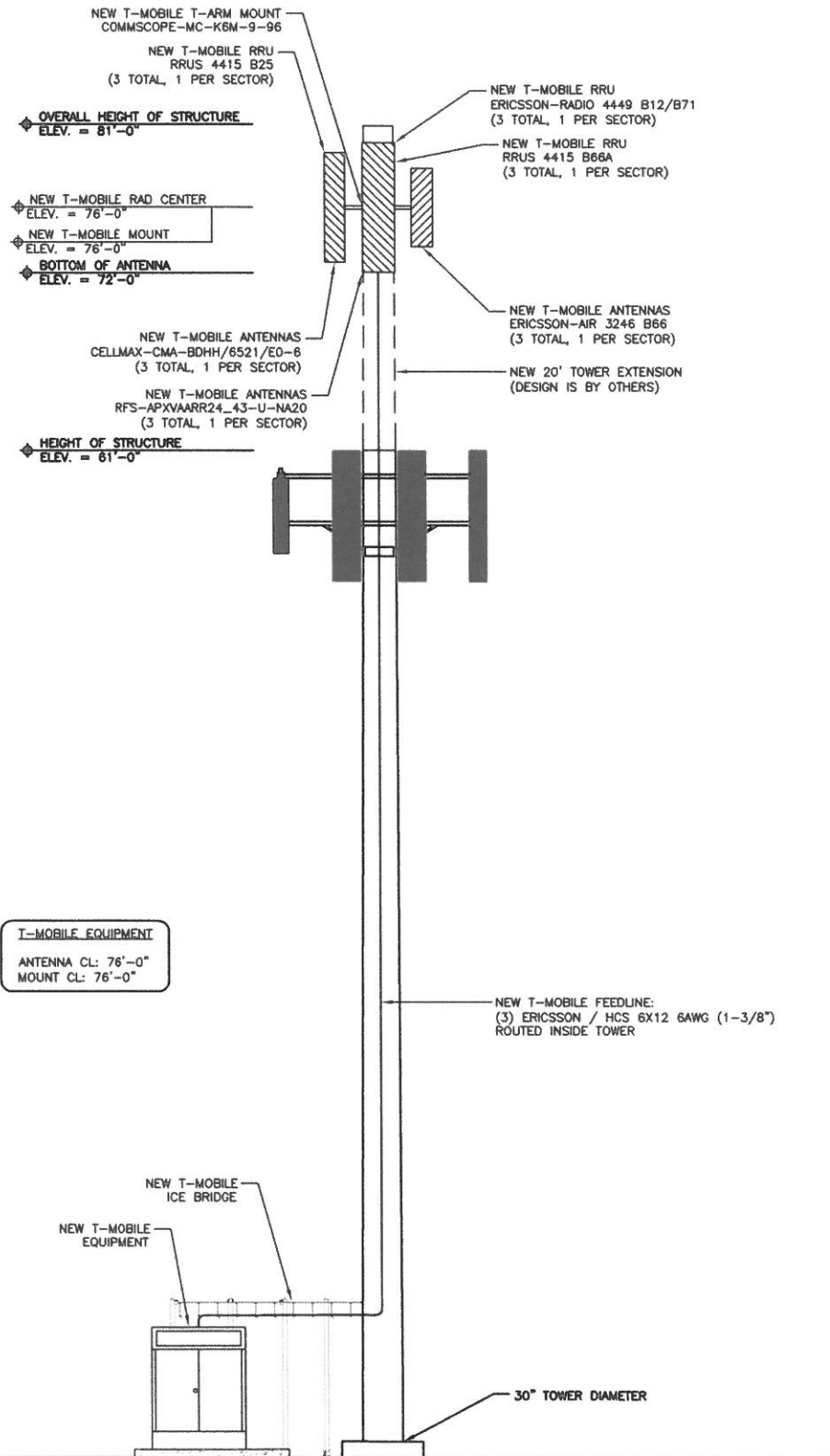
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: **C-2** REVISION: **1**

1 ENLARGED EQUIPMENT PLAN  
 SCALE: 1/2"=1'-0" (FULL SIZE)  
 1/4"=1'-0" (11x17)

**INSTALLER NOTE:**  
DIRECT TOWER MOUNTED EQUIPMENT MUST NOT TRAP OR INTERFERE W/ EXISTING SAFETY CLIMB.

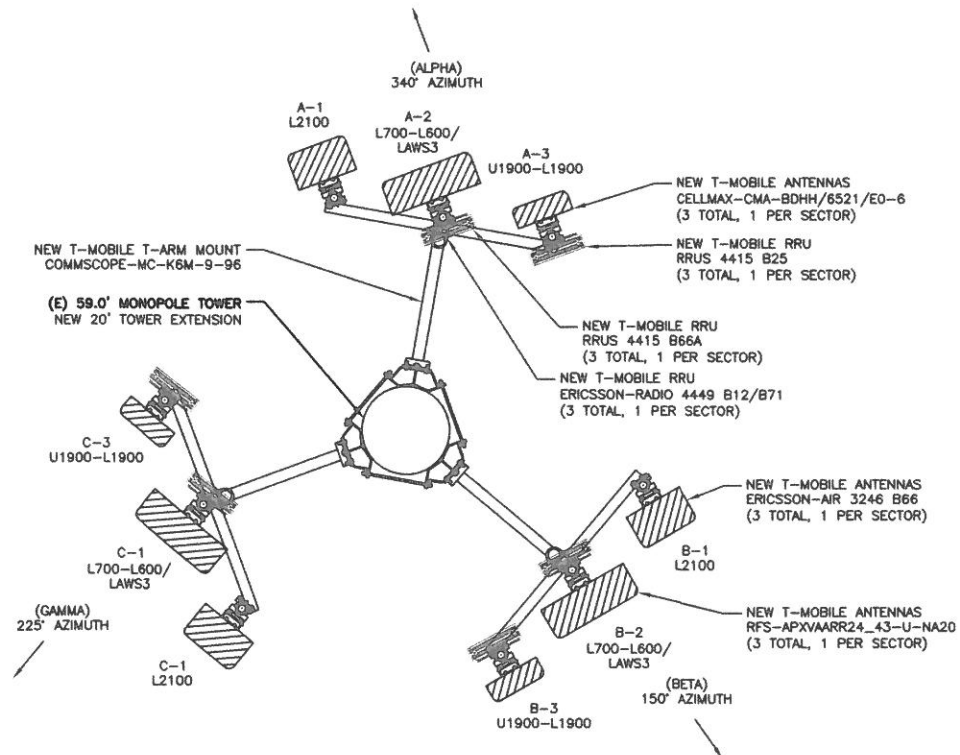
**TOWER STRUCTURAL ANALYSIS:**  
IS BY OTHERS, NO NEW EQUIPMENT TO BE INSTALLED ON TOWER WITHOUT THE APPROVAL OF STRUCTURAL ENGINEER.



1 FINAL ELEVATION  
SCALE: NOT TO SCALE

ANTENNA SCHEDULE									
SECTOR	ALPHA			BETA			GAMMA		
ANTENNA POSITION	A-1	A-2	A-3	B-1	B-2	B-3	C-1	C-2	C-3
ANTENNA TYPES	L2100	L700-L600/LAWS3	U1900-L1900	L2100	L700-L600/LAWS3	U1900-L1900	L2100	L700-L600/LAWS3	U1900-L1900
AZIMUTH	340°	340°	340°	150°	150°	150°	220°	220°	220°
RAD CENTER (AGL)	76'-0"	76'-0"	76'-0"	76'-0"	76'-0"	76'-0"	76'-0"	76'-0"	76'-0"
MODEL	ERICSSON - AIR3246 B66	RFS-APXVAARR24_43-U-NA20	CELLMAX TECHNOLOGIES CMA-BDHH/6521/E0-6	ERICSSON - AIR3246 B66	RFS-APXVAARR24_43-U-NA20	CELLMAX TECHNOLOGIES CMA-BDHH/6521/E0-6	ERICSSON - AIR3246 B66	RFS-APXVAARR24_43-U-NA20	CELLMAX TECHNOLOGIES CMA-BDHH/6521/E0-6
FEEDER LENGTH	±110'-0"	±110'-0"	±110'-0"	±110'-0"	±110'-0"	±110'-0"	±110'-0"	±110'-0"	±110'-0"
FEEDER TYPE	HYBRID CABLE	HYBRID CABLE	HYBRID CABLE	HYBRID CABLE	HYBRID CABLE	HYBRID CABLE	HYBRID CABLE	HYBRID CABLE	HYBRID CABLE

2 ANTENNA SCHEDULE  
SCALE: NOT TO SCALE



3 FINAL ANTENNA LAYOUT  
SCALE: NOT TO SCALE



**T-Mobile**  
121 W. ELECTION RD., SUITE 330  
DRAPER, UT 84020

**CROWN CASTLE**  
116 INVERNESS DR. EAST STE# 280  
ENGLEWOOD, CO 80112

T-MOBILE SITE NUMBER:  
**SL07007A**

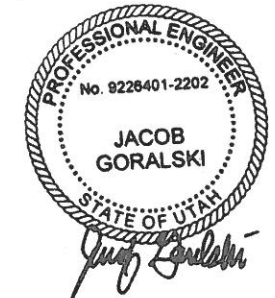
BU #: 845638  
**ROSE PARK**

745 N WARM SPRINGS ROAD  
SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES/QA
A	12-04-2018	JAS	PRELIMINARY	ELG
0	12-18-2018	JAS	FINAL	ELG
1	01-28-2019	JAS	FINAL	ELG



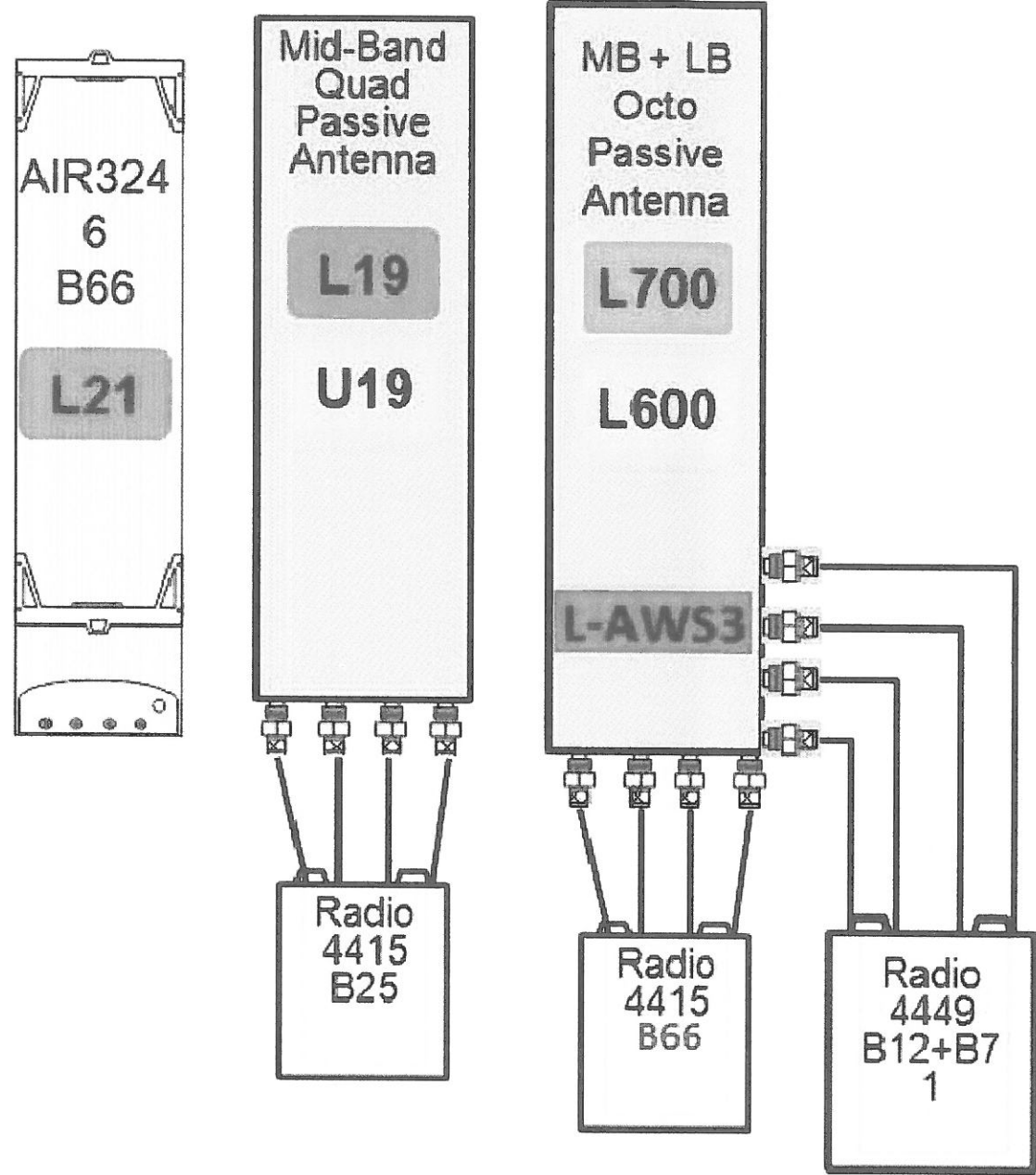
1/31/2019

**JACOB GORALSKI, PLLC**  
CONSULTING ENGINEER  
JACOB GORALSKI, PLLC  
UT PE# 9226401-2202  
1106 COLBI ST.  
KENNEDALE, TX 76060  
(817) 456-2621

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: **C-3** REVISION: **1**





**T-Mobile**  
 121 W. ELECTION RD., SUITE 330  
 DRAPER, UT 84020

**CROWN CASTLE**  
 116 INVERNESS DR. EAST STE# 280  
 ENGLEWOOD, CO 80112

T-MOBILE SITE NUMBER:  
**SL07007A**

BU #: **845638**  
**ROSE PARK**

745 N WARM SPRINGS ROAD  
 SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	12-04-2018	JAS	PRELIMINARY	ELG
0	12-18-2018	JAS	FINAL	ELG
1	01-28-2019	JAS	FINAL	ELG

**PROFESSIONAL ENGINEER**  
 No. 9226401-2202  
**JACOB GORALSKI**  
 STATE OF UTAH

*Jacob Gorski*

1/31/2019

**JACOB GORALSKI, PLLC**  
 CONSULTING ENGINEER  
 JACOB GORALSKI, PLLC  
 UT PE# 9226401-2202  
 1106 COLBI ST.  
 KENNEDALE, TX 76060  
 (817) 456-2621

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

1 PLUMBING DIAGRAM  
 SCALE: NOT TO SCALE

SHEET NUMBER: **C-4** REVISION: **1**

**Section 1 - Site Information**

Site ID: **SL07007A**  
 Status: **Final**  
 Version: **0.1**  
 Project Type: **Cell Split**  
 Approved: **8/3/2018 2:31:58 PM**  
 Approved By: **GSM1800ASInha11**  
 Last Modified: **8/3/2018 2:31:58 PM**  
 Last Modified By: **GSM1800ASInha11**

Site Name: **SL07007A**  
 Site Class: **<undefined>**  
 Site Type: **<undefined>**  
 Sector Type: **2018**  
 Market: **SALT LAKE CITY UT**  
 Vendor: **Ericsson**  
 Lead: **Not Specified**

Latitude: **40.7852300000**  
 Longitude: **-111.9114900000**  
 Address: **725 N Warm Springs Rd**  
 City, State: **Salt Lake City, UT**  
 Region: **WEST**

RAN Template: **67D98M** AL Template: **67D98M\_1xAIR+1QP+1OP**  
 Sector Count: **3** Antenna Count: **9** Core Line Count: **0** TMA Count: **0** RFU Count: **9**

**Proposed RAN Equipment**

Template: **67D98M**

Enclosure	1	2
Enclosure Type	<b>RBS 8102 MU AC</b>	<b>Ancillary Equipment</b>
Baseband	<b>DUW30 U1800</b> <b>BB 5216 L1800</b> <b>BB 6530 L2100</b> <b>BB 6530 N800 (DARK)</b> <b>L700</b> <b>LAW83</b> <b>L800</b>	
Hybrid Cable System	<b>Ericsson 6x12 HCS 6AWG 30m (x3)</b>	
Multiplier	<b>(xMU)</b>	

RAN Scope of Work  
 Comments from SCIP - 60' Crown Castle Monopole tower. Per Crown, 60' RAD available. Tower is very close to a billboard which "might" shadow TMO's RAD center. Crown has confirmed that a 20' tower extension is doable. Jurisdiction will require a CUP for the extension.

**Sector 1 (Proposed) view from behind**

Coverage Type	A - Outdoor Macro									
Antenna	1			2				3		
Antenna Model	<b>Ericsson - AIR3246 B86 (Octo)</b>			<b>RFS - APXVAARR24_43-U-NA20 (Octo)</b>				<b>CellMax - CMA-BDHH8521/E0-8/RET/TB05 (Quad)</b>		
Azimuth	<b>340</b>			<b>340</b>				<b>340</b>		
E. Tilt	<b>0</b>			<b>0</b>				<b>0</b>		
Height	<b>78</b>			<b>78</b>				<b>78</b>		
Ports	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Action Tech.	<b>L2100</b>	<b>L2100</b>	<b>L2100</b>	<b>L2100</b>	<b>L700</b> <b>L800</b>	<b>L700</b> <b>L800</b>	<b>LAW83</b>	<b>LAW83</b>	<b>U1800</b> <b>L1800</b>	<b>U1800</b> <b>L1800</b>
Deck Tech.										
Reinforced Tech.										
Discontin. Tech.										
E. Tilt	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>8</b>	<b>8</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
Cables	<b>Fiber Jumper - 9 ft.</b>	<b>Fiber Jumper - 9 ft.</b>	<b>Fiber Jumper - 9 ft.</b>	<b>Fiber Jumper - 9 ft.</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>
TMA										
Diagonals / Combiners										
Radio					<b>Radio 4449 B71+B1 2 (At Antenna)</b>		<b>Radio 4415 B86A (At Antenna)</b>		<b>Radio 4415 B25 (At Antenna)</b>	
Sector Equipment										

**Sector 2 (Proposed) view from behind**

Coverage Type	A - Outdoor Macro									
Antenna	1			2				3		
Antenna Model	<b>Ericsson - AIR3246 B86 (Octo)</b>			<b>RFS - APXVAARR24_43-U-NA20 (Octo)</b>				<b>CellMax - CMA-BDHH8521/E0-8/RET/TB05 (Quad)</b>		
Azimuth	<b>150</b>			<b>150</b>				<b>150</b>		
E. Tilt	<b>0</b>			<b>0</b>				<b>0</b>		
Height	<b>78</b>			<b>78</b>				<b>78</b>		
Ports	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Action Tech.	<b>L2100</b>	<b>L2100</b>	<b>L2100</b>	<b>L2100</b>	<b>L700</b> <b>L800</b>	<b>L700</b> <b>L800</b>	<b>LAW83</b>	<b>LAW83</b>	<b>U1800</b> <b>L1800</b>	<b>U1800</b> <b>L1800</b>
Deck Tech.										
Reinforced Tech.										
Discontin. Tech.										
E. Tilt	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>8</b>	<b>8</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
Cables	<b>Fiber Jumper - 9 ft.</b>	<b>Fiber Jumper - 9 ft.</b>	<b>Fiber Jumper - 9 ft.</b>	<b>Fiber Jumper - 9 ft.</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>
TMA										
Diagonals / Combiners										
Radio					<b>Radio 4449 B71+B1 2 (At Antenna)</b>		<b>Radio 4415 B86A (At Antenna)</b>		<b>Radio 4415 B25 (At Antenna)</b>	
Sector Equipment										

**Sector 3 (Proposed) view from behind**

Coverage Type	A - Outdoor Macro									
Antenna	1			2				3		
Antenna Model	<b>Ericsson - AIR3246 B86 (Octo)</b>			<b>RFS - APXVAARR24_43-U-NA20 (Octo)</b>				<b>CellMax - CMA-BDHH8521/E0-8/RET/TB05 (Quad)</b>		
Azimuth	<b>220</b>			<b>220</b>				<b>220</b>		
E. Tilt	<b>0</b>			<b>0</b>				<b>0</b>		
Height	<b>78</b>			<b>78</b>				<b>78</b>		
Ports	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Action Tech.	<b>L2100</b>	<b>L2100</b>	<b>L2100</b>	<b>L2100</b>	<b>L700</b> <b>L800</b>	<b>L700</b> <b>L800</b>	<b>LAW83</b>	<b>LAW83</b>	<b>U1800</b> <b>L1800</b>	<b>U1800</b> <b>L1800</b>
Deck Tech.										
Reinforced Tech.										
Discontin. Tech.										
E. Tilt	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>8</b>	<b>8</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
Cables	<b>Fiber Jumper - 9 ft.</b>	<b>Fiber Jumper - 9 ft.</b>	<b>Fiber Jumper - 9 ft.</b>	<b>Fiber Jumper - 9 ft.</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>	<b>Fiber Jumper - 9 ft.</b> <b>Coax Jumper - 10 ft. (x2)</b>
TMA										
Diagonals / Combiners										
Radio					<b>Radio 4449 B71+B1 2 (At Antenna)</b>		<b>Radio 4415 B86A (At Antenna)</b>		<b>Radio 4415 B25 (At Antenna)</b>	
Sector Equipment										

1 RFDS  
 SCALE: NOT TO SCALE

**T-Mobile**  
 121 W. ELECTION RD., SUITE 330  
 DRAPER, UT 84020

**CROWN CASTLE**  
 116 INVERNESS DR. EAST STE# 280  
 ENGLEWOOD, CO 80112

**T-MOBILE SITE NUMBER:**  
**SL07007A**

**BU #: 845638**  
**ROSE PARK**

745 N WARM SPRINGS ROAD  
 SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	12-04-2018	JAS	PRELIMINARY	ELG
0	12-18-2018	JAS	FINAL	ELG
1	01-28-2019	JAS	FINAL	ELG

**PROFESSIONAL ENGINEER**  
 No. 9226401-2202  
**JACOB GORALSKI**  
 STATE OF UTAH

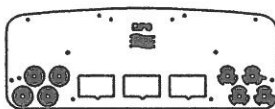
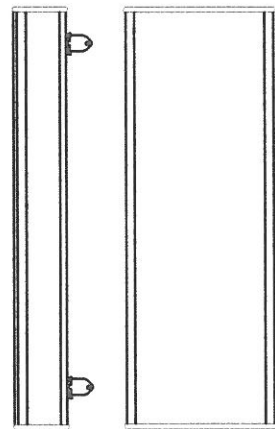
*Jacob Gorski*

1/31/2019

**JACOB GORALSKI, PLLC**  
 CONSULTING ENGINEER  
 JACOB GORALSKI, PLLC  
 UT PE# 9226401-2202  
 1106 COLBI ST.  
 KENNEDALE, TX 76060  
 (817) 456-2621

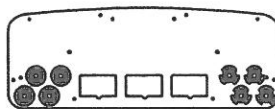
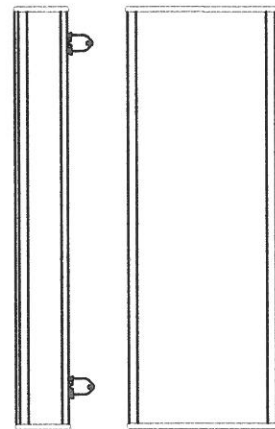
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

**SHEET NUMBER:** **C-5** **REVISION:** **1**



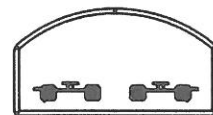
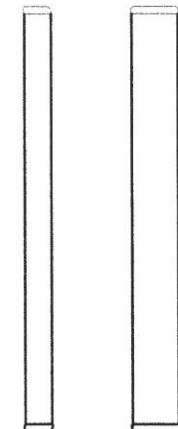
RFS - APXVAARR24\_43-U-NA20  
 SIZE (HxWxD): 95.9x24x8.7 IN.  
 MOUNTING HARDWARE P/N: BSAMNT-4  
 RATED WIND VELOCITY: 150.0 MPH  
 CONNECTOR TYP: 8 X 4.3-10 FEMALE

1 RFS - APXVAARR24\_43-U-NA20  
 SCALE: NOT TO SCALE



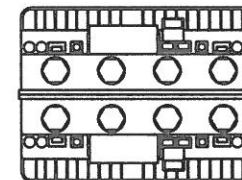
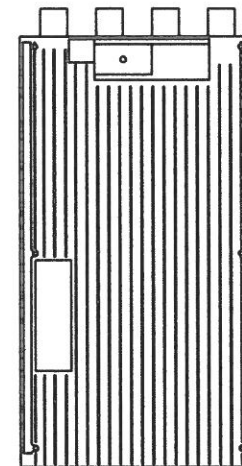
ERICSSON / AIR 3246 B66  
 SIZE (HxWxD): 58.1x15.7x9.4 IN.  
 MOUNTING HARDWARE P/N: BSAMNT-4  
 RATED WIND VELOCITY: 150.0 MPH  
 CONNECTOR TYP: 8 X 4.3-10 FEMALE

2 ERICSSON / AIR 3246 B66  
 SCALE: NOT TO SCALE



CELLMAX TECHNOLOGIES  
 CMA-BDHH/6521/E0-6  
 SIZE (HxWxD): 81.1x14.7x5.2 IN.  
 MOUNTING HARDWARE P/N: TM600899A-2  
 RATED WIND VELOCITY: 150.0 MPH  
 CONNECTOR TYP: 7-16 DIM. FEMALE (4)

3 CELLMAX - CMA-BDHH/6521/E0-6  
 SCALE: NOT TO SCALE

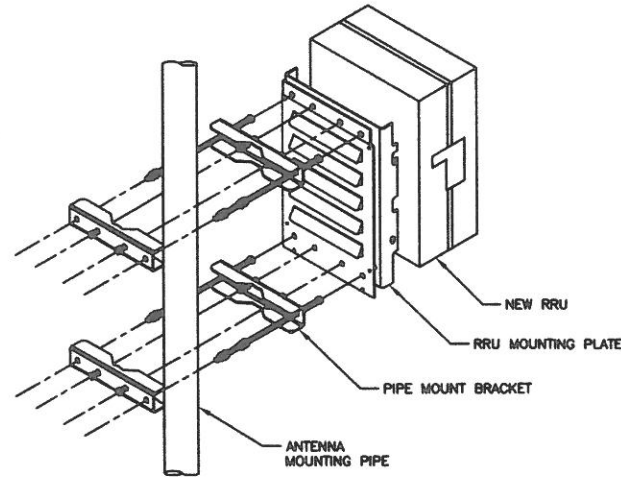
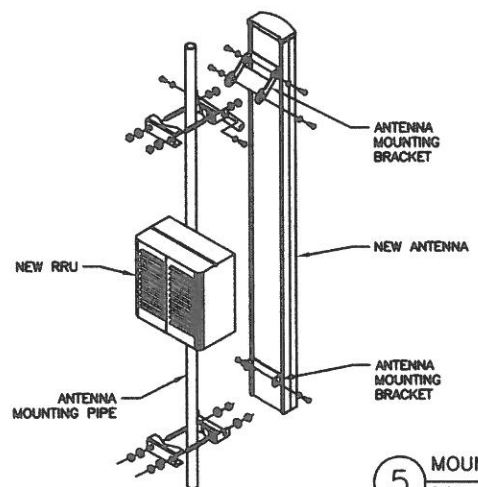


ERICSSON - RADIO 4449 B12/B71  
 WEIGHT (FULLY EQUIPPED): 78.0 LBS  
 SIZE (HxWxD): 14.95x13.19x9.25 IN.

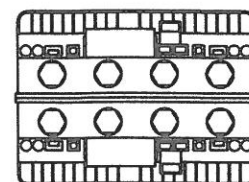
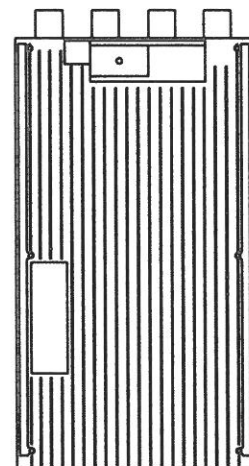
4 ERICSSON - RADIO 4449 B12/B71  
 SCALE: NOT TO SCALE

**INSTALLER NOTES:**  
 1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRU RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.  
 2. DO NOT OPEN RRU PACKAGES IN THE RAIN.  
 3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.

**NOTE:**  
 ANTENNA NOT SHOWN FOR CLARITY

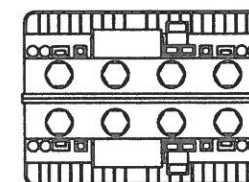
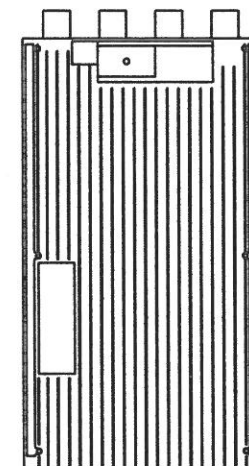


5 MOUNTING DETAILS  
 SCALE: NOT TO SCALE



ERICSSON - RADIO 4415 B66A  
 WEIGHT (FULLY EQUIPPED): 49.6 LBS  
 SIZE (HxWxD): 16.50x13.50x6.30 IN.

6 ERICSSON - RADIO 4415 B66A  
 SCALE: NOT TO SCALE



ERICSSON - RADIO 4415 B25  
 WEIGHT (FULLY EQUIPPED): 44.0 LBS  
 SIZE (HxWxD): 14.96x13.19x5.39 IN.

7 ERICSSON - RADIO 4415 B25A  
 SCALE: NOT TO SCALE

**T-Mobile**  
 121 W. ELECTION RD., SUITE 330  
 DRAPER, UT 84020

**CROWN CASTLE**  
 116 INVERNNESS DR. EAST STE# 280  
 ENGLEWOOD, CO 80112

T-MOBILE SITE NUMBER:  
 SL07007A

BU #: 845638  
 ROSE PARK

745 N WARM SPRINGS ROAD  
 SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	12-04-2018	JAS	PRELIMINARY	ELG
0	12-18-2018	JAS	FINAL	ELG
1	01-28-2019	JAS	FINAL	ELG



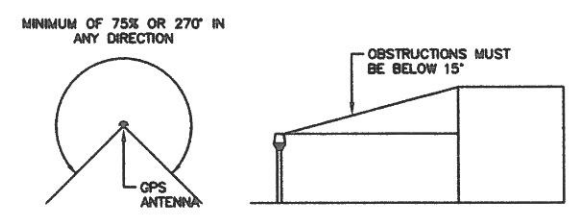
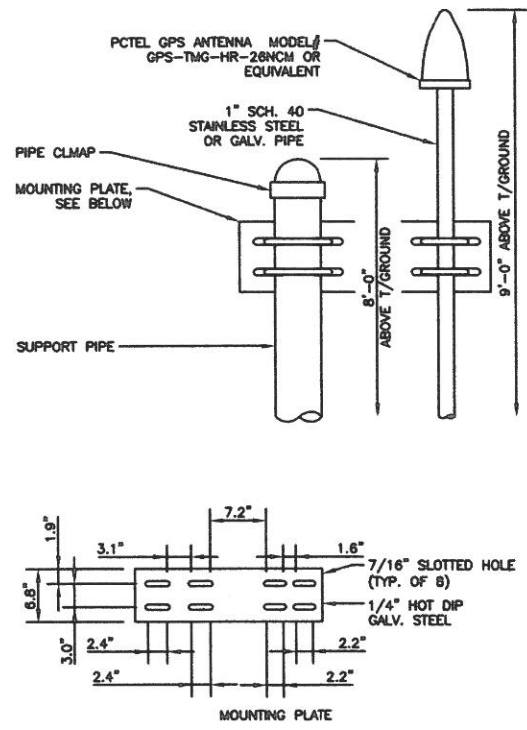
1/31/2019

**JACOB GORALSKI, PLLC**  
 CONSULTING ENGINEER  
 JACOB GORALSKI, PLLC  
 UT PE# 9226401-2202  
 1106 COLBI ST.  
 KENNEDALE, TX 76060  
 (817) 456-2621

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

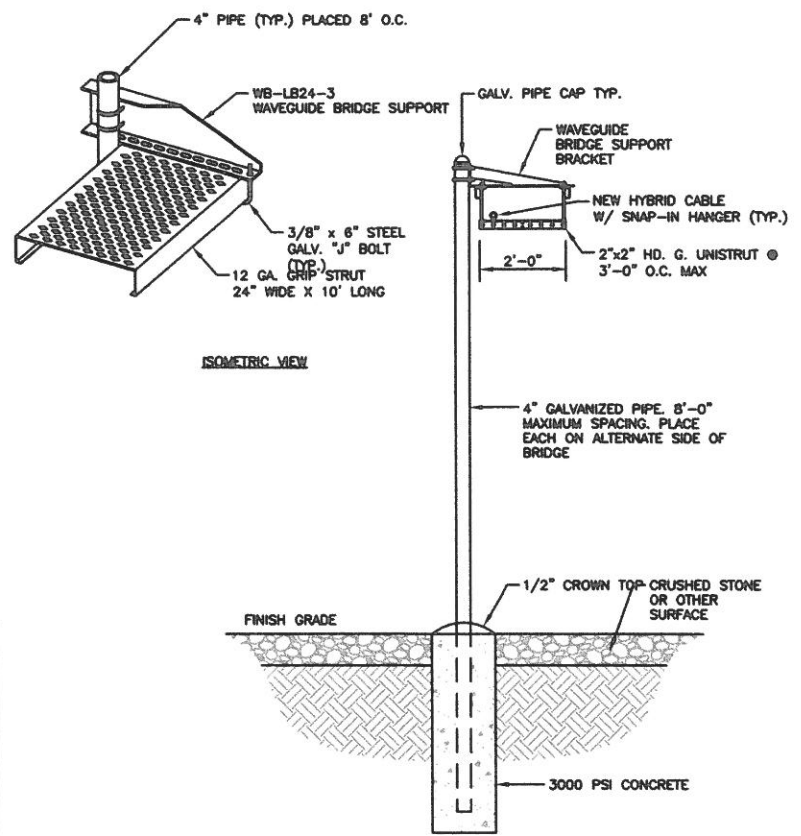
SHEET NUMBER: **C-6** REVISION: **1**



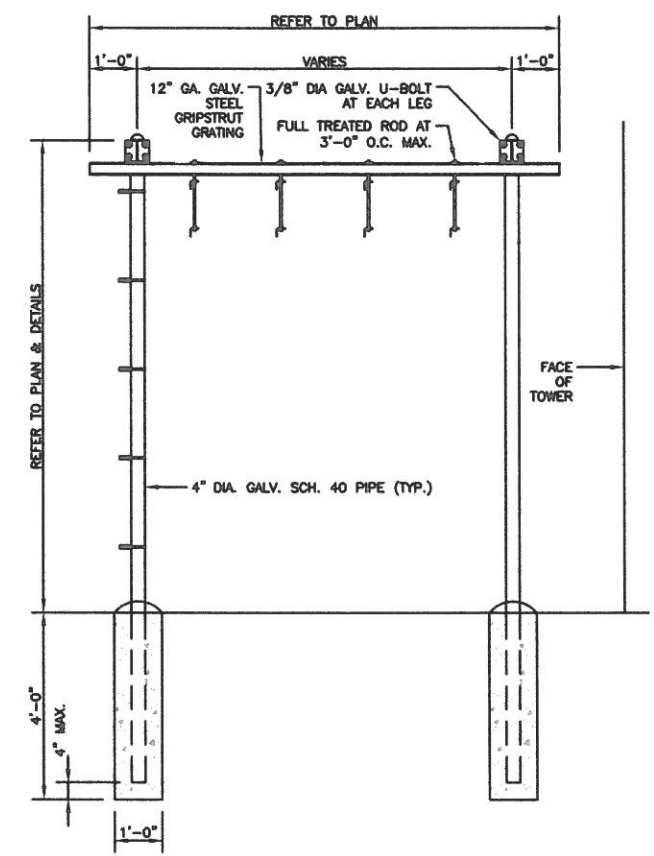


- NOTES:**
1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.
  2. THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 1-1/4" O.D. SCHEDULE 40, GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 18 INCHES) USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE DEBARRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.
  3. IT IS CRITICAL THAT THE GPS ANTENNA IS MOUNTED SUCH THAT IT IS WITHIN 2 DEGREES OF VERTICAL AND THE BASE OF THE ANTENNA IS WITHIN 2 DEGREES OF LEVEL.
  4. DO NOT SWEEP TEST GPS ANTENNA.

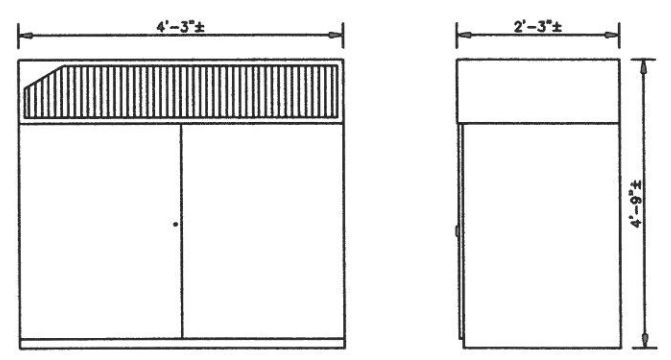
1 GPS ANTENNA DETAIL  
SCALE: NOT TO SCALE



2 ICE BRIDGE DETAIL  
SCALE: NOT TO SCALE



5 NOT USED  
SCALE: NOT TO SCALE



**EQUIPMENT NOTES:**

HEIGHTxWIDTHxDEPTH: 57.08" x 51.00" x 27.55"  
(1450.0mm x 1300.0mm x 700.0mm)

APPROX. WEIGHT: 859 LBS (390 kg)  
(DOES NOT INCLUDE WEIGHT OF BATTERIES)

3 ERICSSON - RBS 6102  
SCALE: NOT TO SCALE

4 NOT USED  
SCALE: NOT TO SCALE

**T-Mobile**  
121 W. ELECTION RD., SUITE 330  
DRAPER, UT 84020

**CROWN CASTLE**  
116 INVERNESS DR. EAST STE# 280  
ENGLEWOOD, CO 80112

T-MOBILE SITE NUMBER:  
**SL07007A**

BU #: 845638  
**ROSE PARK**

745 N WARM SPRINGS ROAD  
SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	12-04-2018	JAS	PRELIMINARY	ELG
0	12-18-2018	JAS	FINAL	ELG
1	01-28-2019	JAS	FINAL	ELG

**PROFESSIONAL ENGINEER**  
No. 9226401-2202  
**JACOB GORALSKI**  
STATE OF UTAH

*Jacob Gorski*  
1/31/2019

**JACOB GORALSKI, PLLC**  
CONSULTING ENGINEER  
JACOB GORALSKI, PLLC  
UT PE# 9226401-2202  
1106 COLBI ST.  
KENNEDALE, TX 78060  
(817) 456-2621

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: **C-7** REVISION: **1**

REINFORCED CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF CAST-IN-PLACE CONCRETE, AND WHERE CODES CONFLICT THE MORE STRINGENT NATIONAL OR LOCAL CODE SHALL GOVERN.
2. SITECAST CONCRETE FOR SLABS AND POST FOOTING SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. CONCRETE TESTING IS NOT REQUIRED FOR SLABS AND POST FOOTINGS UNLESS NOTED OTHERWISE.

SLUMP - 4" MIN / 6" MAX

CLASS OF CONCRETE

CLASS	28 DAYS STR.	MAXWATER/CEMENT RATIO	PLACEMENT LOCATION	NOTES
TYPE 1	3000 PSI	0.55	SLAB & POST FOOTING	NORMAL WEIGHT
TYPE 111*	5000 PSI	0.45	SLAB & POST FOOTING	HIGH EARLY STS.

\*IF REQUIRED BY THE CONSTRUCTION SCHEDULE THE CONTRACTOR MAY SUBSTITUTE TYPE 111 HIGH EARLY STRENGTH CONCRETE WITH THE APPROVAL OF THE CONSTRUCTION MANAGER.

3. REINFORCED STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC UNLESS OTHERWISE NOTED. SPLICES FOR REBAR SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARDS, UNO. LAPS FOR WELDED WIRE FABRIC SHALL BE AT LEAST 8 INCHES, UNO.

4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS.

CONCRETE CAST AGAINST EARTH.....	3"
CONCRETE EXPOSED TO EARTH OR WATER	
#6 AND LARGER .....	2"
#5 AND SMALLER & w/wf .....	1-1/2"

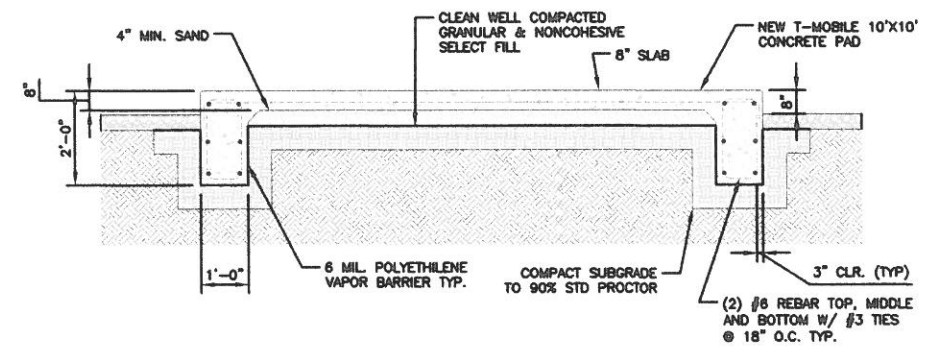
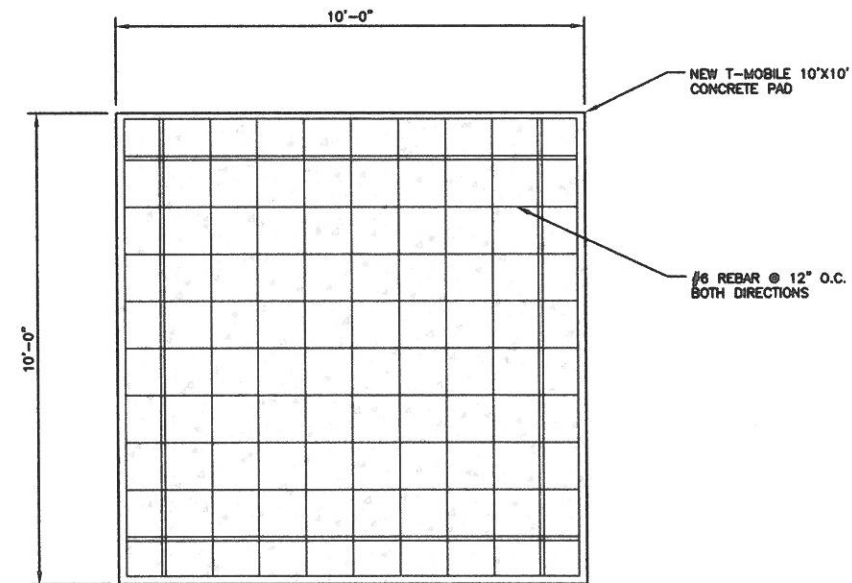
5. MAXIMUM COURSE AGGREGATE SIZE SHALL BE 3/4"

6. INSTALLATION OF CONCRETE ANCHORS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATION. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO THE ANCHOR MANUFACTURER'S SPECIFICATIONS FOR MATERIAL STRENGTH, EMBEDMENT DEPTH, SPACING, AND EDGE DISTANCE OR AS DETAILED ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL. WHEN DRILLING HOLES IN CONCRETE, EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD, HILTI, OR APPROVED EQUAL. IF THE MANUFACTURER'S SPECIFICATIONS AND DETAILS ARE FOUND TO CONFLICT WITH THAT SHOWN HEREIN, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

7. THE CONTRACTOR SHALL VERIFY FROST LINE AND FOOTING DEPTH REQUIREMENTS WITH THE JURISDICTION HAVING AUTHORITY PRIOR TO CONSTRUCTION AND CONSULT THE ENGINEER ACCORDINGLY.

8. THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL CONDUIT SIZES AND PENETRATION LOCATIONS PRIOR TO POURING THE SLAB.

9. SOIL SHALL HAVE MINIMUM 1000 PSF ALLOWABLE BEARING CAPACITY.



1 CONCRETE PAD DETAIL  
SCALE: NOT TO SCALE

T-Mobile  
121 W. ELECTION RD., SUITE 330  
DRAPER, UT 84020

CROWN CASTLE  
116 INVERNESS DR. EAST STE# 280  
ENGLEWOOD, CO 80112

T-MOBILE SITE NUMBER:  
SL07007A

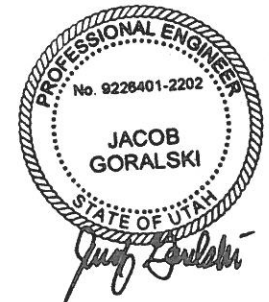
BU #: 845638  
ROSE PARK

745 N WARM SPRINGS ROAD  
SALT LAKE CITY, UT 84116

EXISTING 61.0 FT MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	12-04-2018	JAS	PRELIMINARY	ELG
0	12-18-2018	JAS	FINAL	ELG
1	01-28-2019	JAS	FINAL	ELG



1/31/2019

JACOB GORALSKI, PLLC  
CONSULTING ENGINEER  
JACOB GORALSKI, PLLC  
UT PE# 9226401-2202  
1106 COLBI ST.  
KENNEDALE, TX 76060  
(817) 456-2621

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: C-8 REVISION: 1

## **ATTACHMENT D: ANTENNA ZONING STANDARDS**

21A.40.090.E.2.d – Zoning requirements for monopole with antennas and antenna support structures greater than two feet in width.

Monopole with antennas and antenna support structures greater than two feet are subject to the following standards:

<b>Regulation</b>	<b>Proposal</b>	<b>Compliance</b>
The maximum visible width of individual antennas and antenna mounting structures on a monopole shall not exceed eight feet (8') in height or thirteen feet (13') in width as viewed looking directly at the monopole at same elevation as the antennas and antenna mounting structure	The proposed antenna extension and additional antenna arrays will be located on an existing monopole. The new individual antennas will meet the height and width standards.	Complies
No such monopole shall be located within three hundred thirty feet (330') of a residential zone other than the R-MU district.	The subject telecommunication monopole is located further than 330' from any residential zoning district.	Complies

21A.40.090.E.3.b – Electrical Equipment Located on Private Property:

Electrical equipment located on private property are subject to the following standards:

<b>Regulation</b>	<b>Proposal</b>	<b>Compliance</b>
Electrical equipment shall be located in the rear yard, interior side yard, or within the buildable area on a given parcel. In the case of a parcel with an existing building, the electrical equipment shall not be located between the front and/or corner facades of the building and the street.	All proposed new electrical equipment will be located in the interior side yard of the primary use, no equipment of any kind will encroach in the front yard area. The front yard area in the M-1 zone extends 15' from the front property line.	Complies
Electrical equipment located in a residential zoning district, shall not exceed a width of four feet (4'), a depth of three feet (3'), or a height of four feet (4') to be considered a permitted use.	This standard is not applicable as the subject site is located in a Light Manufacturing District.	Not Applicable
Electrical equipment located in a CN, PL, PL-2, CB, I or OS Zoning District shall not exceed a width of six feet (6'), a depth of three feet (3'), or a height of six feet (6') to be considered a permitted use.	This standard is not applicable as the subject site is located in a Light Manufacturing District.	Not Applicable



<p>The electrical equipment shall be subject to the maximum lot coverage requirements in the underlying zoning district.</p>	<p>This standard is not applicable as the subject site is located in the M-1 zoning district. There are no lot coverage regulations in the M-1 district.</p>	<p>Not Applicable</p>
--	--	-----------------------

## **ATTACHMENT E: CONDITIONAL USE STANDARDS**

**21a.54.080.A Approval Standards:** A conditional use shall be approved unless the planning commission, or in the case of administrative conditional uses, the planning director or designee, concludes that the following standards cannot be met:

1. *The use complies with applicable provisions of this title;*

**Analysis:** The subject site is located in an M-1 (Light Manufacturing) zoning district. Per Section 21A.40.090.E of the Zoning Ordinance, a monopole with antenna and antenna support structures greater than 2' wide with a height of 60' or exceeding the maximum height limit of the zone are required to go through a conditional use approval subject to the monopole, antenna, and electrical equipment meeting all listed requirements.

The telecommunication monopole is existing, the applicant is requesting an extension of the monopole to facilitate the installation of new equipment. The fenced area will also be extended to encompass new electrical equipment on the site. All of the new equipment and the extension of the monopole meets the provisions of this title, as shown in Attachment D.

**Finding:** The proposal complies with the applicable provisions of the Salt Lake City Zoning Ordinance by going through the conditional use process.

2. *The use is compatible, or with conditions of approval can be made compatible, with surrounding uses;*

**Analysis:** The proposed extension of an existing tower is compatible with the surrounding uses. The site is abutting the I-15 corridor which is lined with street lights that are well over 80' in height. All of the other surrounding uses of property are industrial in nature, and while there are no other towers in the area (except the I-15 street lighting), the visual impact of the tower extension is expected to be minimal and not out of character for the area.

**Finding:** Staff finds that the tower extension is compatible with the surrounding uses of the telecommunication site.

3. *The use is consistent with applicable adopted city planning policies, documents, and master plans; and*

**Analysis:** The Capitol Hill Master Plan specifically addresses communication towers. It is stressed in the Master Plan that the number, size, and location of communication towers should be limited; it is also stressed that installation should be in such a way as to be visually compatible with its surroundings so as to limit the visual impact on the community. Co-location of telecommunication facilities is highly encouraged; co-location permits sufficient coverage of services while minimizing the impact these facilities may create by reducing the overall number of towers necessary to provide coverage. With the proposed extension of the telecommunication tower at 745 North Warm Springs Road, the proposed co-location on an existing tower will limit the number of towers in the area while still serving the needs of the community. The proposed extension is located near the I-15 corridor which has a number of street lights which have a much greater height than the 81' tower extension proposed so the visual impact of the tower extension will be of a similar nature to what exists in the area. Further, the subject site is located within an area which generally is considered to be industrial.

**Finding:** The project meets the policies of Communication Towers in the Capitol Hill Master Plan.

4. *The anticipated detrimental effects of a proposed use can be mitigated by the imposition of reasonable conditions (refer to Detrimental Impacts Chart below for details).*

**21a.54.080.B Detrimental Effects Determination**

In analyzing the anticipated detrimental effects of a proposed use, the planning commission shall determine compliance with each of the following:

<b>Criteria</b>	<b>Finding</b>	<b>Rationale</b>
<b>1. This title specifically authorizes the use where it is located</b>	<b>Complies</b>	Monopoles greater than 2' in width, with an overall height exceeding 60' or the maximum height of the M-1 zoning district, is permitted conditional to meeting the criteria listed in the Zoning Ordinance. It is Staff's opinion that the proposed tower extension meets the criteria listed in the Zoning Ordinance.
<b>2. The use is consistent with applicable policies set forth in adopted citywide, community, and small area master plans and future land use maps</b>	<b>Complies</b>	The subject telecommunication site is existing, the proposed extension meets applicable policies in the Capitol Hill Master Plan as it allows for additional co-location on an existing tower.
<b>3. The use is well-suited to the character of the site, and adjacent uses as shown by an analysis of the intensity, size, and scale of the use compared to existing uses in the surrounding area</b>	<b>Complies</b>	The telecommunications site is currently in use and is adjacent to other industrial uses and the I-15 corridor. While the proposed extension is highly visible in the area, the tower is not out of place in the community and will not unduly impact the character or the visual intensity of use in the area.
<b>4. The mass, scale, style, design, and architectural detailing of the surrounding structures as they relate to the proposed have been considered</b>	<b>Complies</b>	The height of the proposed tower extension is significant; however, it is not out of character for the community and there are other structures with similar scaling and mass as that of the proposed extension. There are also other industrial uses in the area meaning the visual impact of the tower extension will be minimal.
<b>5. Access points and driveways are designed to minimize grading of natural topography, direct vehicular traffic onto major streets, and not impede traffic flows</b>	<b>Complies</b>	The proposal will have no traffic impact.
<b>6. The internal circulation system is designed to mitigate adverse impacts on adjacent property from motorized, non-motorized, and pedestrian traffic</b>	<b>Complies</b>	The proposal will have no traffic impact.
<b>7. The site is designed to enable access and circulation for pedestrian and bicycles</b>	<b>Complies</b>	The proposal will have no traffic impact.
<b>8. Access to the site does not unreasonably impact the service level of any abutting or adjacent street</b>	<b>Complies</b>	The proposal will have no traffic impact.
<b>9. The location and design of off-street parking complies with applicable standards of this code</b>	<b>Complies</b>	The proposal will not require additional off-street parking.
<b>10. Utility capacity is sufficient to support the use at normal service levels</b>	<b>Complies</b>	Utility capacity is sufficient to support the proposed tower extension and corresponding equipment additions.
<b>11. The use is appropriately screened, buffered, or separated from adjoining dissimilar uses to mitigate potential use conflicts</b>	<b>Complies</b>	No buffering or screening is required as the proposal is located in an area where industrial uses are common. It will not have undue visual impact on the area. There are no adjoining dissimilar uses so as to be concerned with potential conflicts of use.
<b>12. The use meets City sustainability plans, does not significantly impact the quality of surrounding air and water, encroach into a river or stream, or introduce any hazard or environmental damage to any adjacent property, including cigarette smoke</b>	<b>Complies</b>	The proposal will not unduly impact the environment or introduce any hazard to the environment or the community.
<b>13. The hours of operation and delivery of the use are compatible with surrounding uses</b>	<b>Complies</b>	The proposal will not have operating hours and is an unmanned use.
<b>14. Signs and lighting are compatible with, and do not negatively impact surrounding uses</b>	<b>Complies</b>	The proposal will not require signs or lighting.

<b>15. The proposed use does not undermine preservation of historic resources and structures</b>	<b>Complies</b>	The site is outside of any designated historic district, and therefore is not subject to this criterion.
--	-----------------	--

**Finding:** In analyzing the anticipated detrimental effects of the proposed use, Staff finds that the request complies with the criteria listed above.

**Section 21A.40.090.E.9 Additional Conditional Use Requirements (for antennas)**

In addition to conditional use standards outlined in Section 21A.54 (above) of the zoning ordinance; the following shall be considered by the Administrative Hearing Officer:

- a. Compatibility of the proposed structure with the height and mass of existing buildings and utility structures;
- b. Whether collocation of the antenna on the other existing structures in the same vicinity such as other towers, buildings, water towers, utility poles, etc., is possible without significantly impacting antenna transmission or reception;
- c. The location of the antenna in relation to existing vegetation, topography and buildings to obtain the best visual screening;
- d. Whether the spacing between monopoles and lattice towers creates detrimental impacts to adjoining properties.

**Analysis:** The telecommunication tower is existing; the proposal is to extend the tower an additional 20’ in height. While an 81’ tower will have a visual affect in the area, it is not out of place for the proposed location. The subject site is located near the I-15 corridor in an area with existing industrial use impacts. The I-15 corridor has street lighting with a much greater height and other tall structures, such as billboards, along this corridor are common. The tower is existing so co-locating individual antennas on an existing tower limits the number of towers proposed within City boundaries while still serving the needs of the community.

**Finding:** This project satisfies the additional use requirements of Section 21A.40.090.E.9.

## **ATTACHMENT F: PUBLIC PROCESS AND COMMENTS**

### **Public Notice and Comments**

The following is a list of public notices that were sent related to the proposed project:

- Notice of the project and request for comments was sent to the Chairs of the Capitol Hill and Rose Park Community Councils on February 21, 2019. These Community Councils did not request to have the applicant and staff attend a regular meeting to explain the proposal (see notices attached).
- An early notification letter explaining the proposal to property owners and tenants within 300 feet of the site was sent on February 21, 2019 (see letter and mailing list attached).
- Notice of the open house was sent on March 11, 2019. No public comments were received in response to the open house notice.

### **Notice of the public hearing for the proposal included:**

- The public hearing notice was mailed on April 9, 2019.
- The public notice was posted on City and State websites and Planning Division list serve on April 9, 2019.
- The public hearing notice sign was posted on the property on April 11, 2019.

### **Public Input:**

A public open house was held on March 20, 2019 at the Public Safety Building. Two residents attended from the Rose Park Neighborhood. Both their comments were generally positive as they were both looking forward to improved cell services in the area.

There were no other public comments submitted during the public comment period or open house.

## **ATTACHMENT G: CITY REVIEW COMMENTS**

---

**Engineering (Scott Weiler)** – No issues from Engineering

**Engineering (Michael Barry)** – No issues from Engineering

**Fire (Kenney Christensen)** – No issues from Fire

**Transportation (Michael Barry)** – No issues from transportation.

**Zoning (Alan Hardman)** – No zoning comments to add.